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ABSTRACT

This document is composed of four issues of a quarterly newsletter on the use of assistive technology applications in educating young children with disabilities. Feature articles include: "Study Reveals Assistive Technology Effects, Benefits, Barriers" (Patricia Hutinger and others); "Adapting Macintosh Software To Meet Individual Needs" (Linda Robinson and Carol Schneider); a conference keynote address by Charles Frame; "Frolicking Fun with the Fripples" (Lela Cunningham); "Sheboygan Site Has ACTTive Early Intervention Program" (Linda Robinson); "Study Shows Assistive Technology Produces Positive Effects, Makes Recommendations for Future Efforts" (Patricia Hutinger); "Technology Provides Valuable Learning Tools for Children with Disabilities"; "The Potential of Assistive Technology" (Patricia L. Hutinger); and "Memory: An Overview" (Carol Schneider). Curriculum activities include "Controlling Familiar Sounds," "Sounds around Me," and "Storytime with Bobby and Friends." Brief descriptive reviews are provided of several software programs, such as "The Backyard," "Print Shop Deluxe," "Storytime Tales," "Circletime Tales," "Putt Putt Joins the Parade," "Thinkin' Things," "Ugly Duckling," "Sammy's Science House," "Words around Me," "Easy Street," "Big Bug Alphabet Book," "EA*Kids Art Center," "IntelliPics," and "The STACK SHOP." Notes about switch software, new devices for alternate keyboard input, technical assistance videotapes, and gestural input system development are also provided. (JDD)

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Volume 9 Numbers 1-4
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Study Reveals Assistive Technology Effects, Benefits, Barriers

by Patricia Hutinger, Sharon Hall, & Brenda Jameson

According to the results of a recently completed study at Western Illinois University, parents and service providers perceived that assistive technology was effective in developing social-emotional, academic, and correlate skills in children with multiple disabilities. Funded by the Technology, Educational Media, and Materials for Individuals with Disabilities Program in the U.S. Department of Education, the purpose of the two-year study was to determine the effects of technology applications and barriers on the achievement of educational goals of children with multiple disabilities.

The study examined changes seen in children as a result of participating in a variety of assistive technology experiences carried over into other parts of their lives. A modified naturalistic inquiry approach incorporating qualitative data was used. Data collection procedures included observations, videotapes of children as they used assistive technologies, questionnaires and interviews with teachers and parents, and other relevant materials.

Procedures

Three groups of children with multiple disabilities who began using technology in early intervention programs were studied, together with their families, teachers, support staff, and administrators. The children were enrolled in 11 school districts located in western Illinois and in ACTT replication sites. Group I consisted of seven children, four girls and three boys, who were relatively new users of assistive technology. These children, originally assessed by Project TTAP (Technology Team Assessment Process) for appropriate assistive technology applications and equipment, ranged in age from 4 to 10. Seven Group I parents and 19 professionals, including classroom teachers, LD resource teachers, and speech therapists participated.

Group II was composed of seven children, 1 girl and 6 boys, who had been introduced to assistive technology through Project ACTT. They had used technology applications for a number of years, beginning in preschool or birth to three programs. Group II children ranged in age from 8 to 14. Six Group II parents and 12 professionals, including administrators, classroom and resource teachers, and speech therapists participated.

Group III, which served as a comparison group, included 27 children, 11 girls and 16 boys. Their ages ranged from 2 to 14. Nine parents, and 17 professionals, including a state technology coordinator, were participants.

Data were collected over a 20 month period. An average of 10 hours of interviews and 13 hours of on-site observa-

continued on page 3

Adapting Macintosh Software to Meet Individual Needs

by Linda Robinson and Carol Schneider

Activities can be designed to reinforce beginning switch skills for children who have severe disabilities and will eventually be using a scanning mode for communication. ACTT has defined six levels of switch progression to prepare a child for scanning. Levels range from establishing causality with simple switch input to communicating through pictures or words. Through the use of Ke:nx®, an adaptive interface for the Macintosh, software can be customized according to different levels of switch use.

As an example, ACTT has taken one software program, **Millie's Math House** (Edmark), and designed Ke:nx® set-ups to reinforce various switch skills. One set-up to reinforce causality or the first level of switch progression involves the use of four switches, Ke:nx® and the Multiple Switch Box. The four switches are set up to activate the cow, dog, duck and pig in "Here Comes Billie & Boing." This portion of the program presents the child with several animal blocks. The child can move the mouse to one of the blocks and click to hear that animal sound, or a game can be played in which the child is required to click one of the animals to complete a specific pattern. To simplify the program, a Ke:nx®

continued on page 4

From The Editors. . .

by Linda Robinson

It's that time of year again when we look longingly toward an early Spring, and Macomb Projects' staff anxiously prepare for the ACTT conference! Every year we feel that we are planning for the best one yet, and this year we are sure of it. Augmentative communication will be the main focus of our keynote speaker on Thursday. We are fortunate to have Chuck Frame, the developer of the prototype for the SpeakEasy communication device, share his expertise with us. Along with his presentation and workshops, we will be providing quite a variety of topics by other presenters.

Participants always leave Macomb with practical ideas that they can implement easily at their own sites. If you have joined us in the past, you can attest to this fact, and we gladly welcome you back for a whole new set of technology ideas. If you have not attended our conference before, we hope that you will consider ACTT V as your introduction to a very specialized early childhood technology conference. To encourage staff at our ACTT sites to attend the conference, we are offering a $20 discount off of the regular two-day registration fee. If you are part of an ACTT replication site program and haven't been to Macomb since training, now is the time to update your technology skills.Further details about the conference are contained in this issue . (See pages 10 and 13.)

Some of the articles in this issue of **ACTTive Technology** contain bits of information which will be expanded upon during the conference. For example, the front page article about the effects, benefits, and barriers of technology includes a sampling of data collected over the past two years. Staff from our Research Project will present further data and summarize their findings during one of the conference sessions. The other front page story on Macintosh applications includes descriptions of a few of the adaptations ACTT has designed for young children. You can learn how to design your own Unicorn overlays and switch set-ups with Ke:nx during a conference workshop.

Several other sessions will feature information on developing Macintosh activities for preschool children. Two of the presentations will deal specifically with ways to incorporate technology into art activities. Again this year we will offer a switch construction workshop in which participants can choose to make one or more switches selected from a variety of types.

One of the biggest hits of the conference each year is public domain software. Besides Apple software, we now provide information on Macintosh programs. One of the better Macintosh public domain programs is reviewed for you in this issue. There will be a conference session focusing on public domain and shareware and ways to use a variety of these programs. If you want to review software yourself, ACTT V will be a good opportunity to preview both public domain and commercial programs. Public domain software will be available for purchase.

As you read through the articles in this issue and they spur your further interest in these subjects, remember you can get first-hand information on almost any topic related to technology and early childhood at ACTT V. Macomb is a great place to be in March (and that has nothing to do with the weather)! Hope to see you here.

Table of Contents

Study Reveals Assistive Technology, Effects, Benefits, Barriers 1
Adapting Macintosh Software 1
From the Editors 2
Apple Stops Production of IIe 4
Curriculum ACTTivities 5
Resource Books 6
NICHCY Address 6
Technology Provides Valuable Learning Tools 7
Low Cost Technology Resource Guide 7
Software Review: The Backyard .. 8
Software Review: Baby Smash 8
Ke:nx Set-ups for Millie 8
Software Review: Banner Books .. 9
Calendar of Conferences 9
Software Review: Print Shop Deluxe 9
ACTT V Conference 10
Shareware and Public Domain Resources 11
Software from Don Johnston 12
Videos Highlight Behavior Management, Technology, Grant Writing, Inclusion 12
ACTT Summer Training 12
ACTT V Keynote: Augmentative Communication 13
ACTT V Registration Form 13
Macintosh Technology for Young Children Video 14
Professional Competency Lists 14
Simple Switch Software 15
Product Order Form 15
ACTTive Technology Subscription Form 16

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Assistive Technology Effects **continued from page 1**

tions were conducted for each child. All children in Groups I and II were seen at school and home twice monthly at approximately two week intervals.

Comprehensive case studies were written for each child in Groups I and II. Telephone interviews with Group III parents and professionals were carried out three times during the study. A national panel of seven experts reviewed procedures and data, providing input from the onset of the project.

Results

Benefits. The parents and school staff were asked to evaluate the effects of assistive technology use on the children across eight skill areas. These areas included communication, play, functional activities, academics, social interactions, social-emotional development, environmental control, and emotional outcomes. A summary of their responses is shown in Table 1.

The staff for Group I reported improvements in all the children's communication, academics, social interactions, social-emotional skills, and environmental control. A teacher explained how technology has helped two 12 year-old children gain this control, *"They [two study children in her class] enjoy it...and on the computer, they can make choices and tell us what they want depending on the program."* Another Group I teacher characterized the changes she saw in a child as a result of her use of technology. *"She attends to it [the computer] more than other toys. She's become more interactive with all of us. She gives better eye contact. She is more personable, more affectionate."*

Group II staff reported all children displayed little improvement or change in only two areas, play and functional activities.

The parents of all the children in Groups I and II reported improvements in each skill area. A mother described the skill improvements displayed by her young son, *"The main thing is, he is more independent. He is getting along with the other kids a lot better. His behavior is better when he is on the computer..."*

All respondents were asked to describe the benefits of assistive technology applications for the children. Group I, Group II, and Group III staff members and Group I parents reported technology helped most with the development of social-emotional skills. This was followed in descending order by cognitive development, communication-language development, and motor development.

Group II parents reported their children showed equal improvements in the areas of social-emotional development and cognition, followed by communication-language development. A Group II mother discussed one way her son used assistive technology, a switch-activated communication device, to participate in classroom activities. She said, "He's proud of himself when he has the 'Pledge of Allegiance' on. I think he is happier." However, Group II families did not report benefits in motor development.

Group III parents indicated major skill improvement as social-emotional, followed by communication-language, cognition, and motor development.

Barriers. All respondents were asked to describe the barriers they faced while implementing assistive technology either in instructional or home settings. The majority of the families and staff (ranging from 51% to 73%) identified barriers related to financial or lack of adequate technology training. Financial concerns included inadequate equipment, inadequate classroom staffing, and limited educational services. Training concerns involved the lack of personal training and technology support services.

Additional problems reported by staff and parents alike in all three groups were: (a) malfunctioning equipment, (b) inadequate equipment, and (c) time constraints in personal or classroom schedules that precluded adequate preparation on technology.

Parents also found that some vendors were unreliable when making repairs. Rather than dealing with these vendors, parents tended to make their own equipment adjustments and repairs. One mother cited an additional barrier concerning second-hand equipment. She said, "*We have just tons of pro-*

continued on page 11

Report of Effects of Technology Over Time

	Group I		Group II	
Skills Improved	Parents (N=6)	Staff (N=15)	Parents (N=6)	Staff (N=16)
Communication	83%	59%	57%	67%
Play Activities	75%	40%	100%	86%
Functional Activities	50%	44%	57%	59%
Academics	87%	59%	90%	57%
Social Interaction	83%	50%	50%	55%
Social Outcomes	75%	57%	70%	51%
Control over Environment	67%	58%	88%	80%
Emotional Outcomes	83%	90%	100%	80%

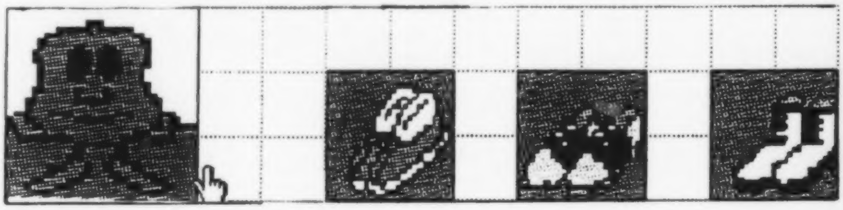
Adapting Macintosh Sotware **continued from page 1**

set-up can be made so that a switch press takes the place of the mouse. The set-up is designed so that a press on one of the four switches produces an animal sound. At the simplest level the child is learning that he can control the sound made by a desired animal by pressing one of the switches. With other set-ups the child will eventually learn to press a switch at an appropriate time to get a desired result.

At a higher level of switch progression, the child may be required to press the switch to start action on the monitor, then press again to get a desired result. An example of this type of switch use is a Ke:nx® set-up with "Build a Bug" portion of **Millie's Math House.** In this part of the program the child can build a bug by selecting bug parts and numbers to indicate their quantity by selecting the items with a mouse click.

For a child who needs switch input, a Ke:nx® set up can be made so that one switch press starts a scan of the bug parts and numbers and a second press activates the selection. The child creates her own bug on the screen by pressing her switch, watching the vertical scan of the bug parts, then pressing the switch again when the scan is at the desired item. She presses her switch to start the scan again and waits until her desired number is highlighted, then presses to select that number. These steps for making a bug help teach important switch pressing skills needed for more sophisticated applications later, such as word processing or communication.

A program such as **Millie's Math House** can also be adapted for touch tablet use through Ke:nx®. If a child is unable to operate the mouse, overlays can be made for the Unicorn Expanded Keyboard so that a press on a picture replaces the mouse movement and click. Also the program can be simplified for young children by designing overlays with a limited number of choices. One example is an overlay for the "Big, Middle, Little" portion of the disk. In this program three characters, a big one, medium size one, and a little one, are in need of shoes. The child is presented with a closet full of shoes from which to choose the right pair to fit each character. There are nine pairs of shoes in the closet. To simplify the program and limit the number of choices for young children, a Ke:nx setup and overlay can be made.



An overlay in which only the little character and little shoes can be presented to the child. A second and third overlay can be made for the big and middle characters. By customizing these overlays, a branching function can be included so that the interventionist can move easily from one overlay to the next. Through Ke:nx® activities can be customized for any software program.

The Computer as Storyteller

One activity children of all ages enjoy is having a book read to them. With the program, **Storytime Tales** (Don Johnston), the computer is used as the storyteller. Children can take turns turning the pages with a switch press or touch on the TouchWindow. When off-computer materials such as a doll with dirty clothes, and a play washing machine are added, the children become active participants in the story.

For a child who is visually impaired, figures printed from the program can be felt and explored as the story is being read on the computer. The sound effects and the tactile figures make the story more concrete for him. The adult and child can both wear an apron made of material to which figures can be easily attached with velcro.

Using Ke:nx® and the Unicorn Expanded Keyboard, a communication activity can be designed around any software program. For example, an overlay can be created to provide a means for children to talk about Bobby, Molly and Forgetful after using **Storytime Tales**. It can be used as an individual or group activity.

continued on page 11

Apple Stops Production of IIe

In January 1983, the Apple IIe made its debut. With that debut began the era of microcomputer technology that has surpassed imaginations. Now, eleven year later, the Apple IIe is dead. Apple officially dropped the IIe and the AppleColor Composite Monitor IIe from its product list in November 1993.

While the computer itself is no longer being produced, there is a IIe emulator card for the Macintosh LC and Performa computers. So don't despair; even when your personal Apple IIe bites the dust, with the IIe card, you will still be able to use your Apple IIe software on the newer machines!

Apple will continue to sell IIe floppy drives and other accessories. Service to existing IIe computers will also continue.

Curriculum ACTTivities

The following curriculum activity was taken from **Building ACTTive Futures: ACTT's Curriculum Guide for Young Children and Technology. Part II: Birth to Three Curriculum Activities.**

Controlling Familiar Sounds

Content Area: Cognition, beginning development of causality

Child Objectives:

1. Press switch to activate tape recorder.
2. Indicate awareness of causality through facial expression.
3. Re-activate switch when tape recorder stops.

Materials:

Battery-operated tape recorder
Tape of familiar sounds
Battery Interrupter
Switch
Timer

Procedures:

Related Activity:
Separately record parents and siblings as they whistle, make silly sounds,and sing silly songs. Also record family members' normal conversations in which they are speaking the child's name. Record animal sounds, music heard in the home, or other sounds which are part of the child's environment.

Switch Activity:

1. Select appropriate switch and secure it in a stable position for the child.

2. Position the child so that he can activate switch with little effort.

3. Attach a timer to the tape recorder and switch. This will allow the tape to play for several seconds before stopping.

4. Activate the switch for the child to direct his attention to the activity.

5. Draw the child's attention to the switch by pointing to it and verbally encouraging him to make the sounds go again.

6. Establish with the family the words to use for prompting or requesting, such as "make more" or "make it go", and use those words consistently with the child.

continued on page 6

Curriculum Activity continued from page 5

7. If child does not respond to a verbal prompt, physically assist him in activating the switch to make him aware of what it does.

8. After the tape stops, allow the child time to voluntarily make an effort to activate the switch or indicate a desire to do so before assisting him again.

9. When child activates the switch by himself, verbally reinforce him by describing what he did ("You did that!" "You made it go!")

10. Change the tape to different sounds when the child appears to become distracted easily or loses interest in one sound.

Helpful Hints:
If the combination of the switch and tape recorder in the child's visual field are distracting or confusing, the tape recorder could be placed out of view so that the child focuses only on the switch. Also adding a visually appealing cover to the switch may help in directing the child's attention to it.

Since the focus of this activity is an auditory stimulus, limit other auditory distractions in the environment. Sounds from a radio or television are common in the home and are often overlooked as distractions to the child. If a large room with a high ceiling is used for this activity, such as at a center location, it may be necessary to confine the sound in a small area so that the child is able to focus on the origin of the sound.

Variation:
After the child becomes familiar with the switch, it may be desirable to use it without the timer. The child would then be required to hold the switch down to play the tape. When using a tape of a silly song, a family member could sing and perform gestures along with the tape and stop when the tape stops. This would add an extra dimension to the activity and may keep the child's attention for a longer period of time.

Adaptations:
Visual Impairment: Place a tactile cover on the switch to encourage the child to physically explore it and activate it.

Auditory Impairment: Use earphones with the tape recorder to amplify the sound for the child. For more severe impairments, this activity may not be appropriate.

Motor Impairment: Select an appropriate switch and placement so that the child is given the opportunity to activate the switch with the slightest amount of effort.

Resource Books Target Families

Two books available from the Family Resource Center on Disabilities (FRCD) focus on strategies to help parents cut through bureaucracy when seeking services for their children.

How to Get Services by Being ASSERTIVE is a 200+ page manual that gives information on building self-confidence and positive attitudes; asserting yourself at IEP meetings and due process hearings; and developing advocacy and assertiveness skills.

How to Organize an Effective Parent/Advocacy Group and MOVE BUREAUCRACIES, also over 200 pages, gives tips on organizing a parent advocacy group and moving bureaucratic mountains.

Each book is $10.00 plus $2.00 for postage and handling. Order from FRCD, 20 East Jackson Blvd., Room 900, Chicago, IL 60604.

New NICHCY Address

National Information
Center for Children and
Youth with Disabilities
(NICHCY)
P.O. Box 1492
Washington, DC 20013
202/416-0300

Technology Provides Valuable Learning Tools for Children with Disabilities

Project ACTT stresses the importance of assisting young children with disabilities to establish independent behavior,, whether those disabilities are mild or severe. We realize that computers are not necessary for all children; however, young children with disabilities must have opportunities to function independently. Computers, adaptive peripherals, developmentally appropriate software and activities, and other assistive technologies provide children with disabilities tools that encourage autonomous behavior in ways that cannot be matched by other materials and experiences.

Assistive technology, including computers and related adaptations, provides a variety of tools to increase the probability that children with disabilities will interact with their world. Using computers in educational activities relevant to needs and interests, children gain self-confidence, social skills, communication skills, gross and fine motor skills, problem solving skills, and a wide range of abilities and knowledge needed to function in society.

Disabled or not, most young children are active learners, constructing knowledge through experiences within their environment. Play is the vehicle children use to make sense out of their world. While computers do not replace manipulative, tactile experiences, they do provide another way for children to interact with people, objects and the environment. The computer is another kind of learning material, another center, a tool of multiple uses and multiple learning experiences.

Computers, adaptive peripherals, developmentally appropriate software and activities, and other assistive technologies provide children with disabilities tools that encourage autonomous behavior in ways that cannot be matched by other materials and experiences.

Although computers can be used for play, the computers children use are not toys. They are the "real thing," the same equipment that their parents use at work or at home, the same equipment their teacher uses to write newsletters and maintain records. Unlike adults who may be apprehensive about technology, children accept it readily. Technology is no more new to them than the myriad of other new experiences and stimuli that come their way regularly. Given proper explanation, children learn to operate a software program as easily as they learn to operate a VCR or zap through TV channels with the remote control.

Computers are especially successful adaptive devices for children with physical disabilities who cannot access their environment. Children who will never be able to hold a pencil can use graphics software for drawing and word processing programs for writing. Children who are unable to speak can use the computer as a communication tool. For those with language, the computer provides topics and incentive for conversations. Social interaction among children using the computer occurs spontaneously and should be encouraged.

Project ACTT believes in children and in providing them opportunities to develop to their highest potential. We have seen how technology applications have contributed to the development of children's skills in many areas over the past ten years. While some may still think of technology as an unnecessary "frill," we see it as a tool — for some children an essential tool — that contributes positively to a child's life.

The computer, along with adaptive peripherals which provide alternate access for children with physical disabilities, is a tool children can use for communication, play, social interaction, problem solving, and other learning. The variety of potential uses and capabilities are far beyond repetitive drill and practice. When technology activities are integrated into the pre-

continued on page 14

Resource Features High Tech at Low Cost

Face it, assistive technology can be expensive. How would you like a resource that shows how to identify the right technology for a person with disabilities, how to build it or where to buy it, and how to use it effectively? **HIGH TECH/LOW COST** is designed to do just that. The 360-page manual and accompanying videotape cover such technology as switches, communication aids, computer access devices, environmental controller, and computers.

For more information about this resource, which also includes a build-it-yourself kit and a quarterly newsletter, call TechnoGenesis 602/778-5611 or 602/776-4248.

Wonderful Backyard Adventures Create Fun-filled Learning Environment

by Carol Bell

If you are looking for adventure, just look in **The Backyard™**! **The Backyard** by Brøderbund provides familiar adventures found in your own backyard and some adventures that are not so common. Created for children ages 3 - 6, **The Backyard's** menu design uses icons of familiar objects found in the backyard to select activities.

When the program begins, children may choose between two characters named Ginger and Pepper to serve as guides through the backyard.

The Backyard is full of mysteries that provide entertainment and education. Exploration in the backyard reveals a fence that plays tunes the children create, ants that play volleyball, a plane that paints clouds and other surprises that bring a smile to your face.

Six familiar objects in the backyard will lead the user to six different activities. Clicking the sandbox will give a child the opportunity to increase mapping skills while digging for buried treasure. The activity offers choices by providing different kinds of maps that increase with difficulty as the user uncovers the buried treasure. A child can create an original buried treasure map.

Opportunities abound in the pumpkin patch where a child can move vegetables to create a scary pumpkin face while increasing pre-math and vocabulary skills. Caterpillars come out to help a child add, subtract, multiply or divide vegetables to add to the pumpkin. A printer icon is available on the screen that offers the child a choice to print the finished creation.

Choosing the scarecrow in the garden will give a child the freedom to create faces for the scarecrow illustrating different emotions that a person may feel. These faces range from silly to real feelings that a person experiences through the day.

Delving into the animal cookies enables children to build exotic animals. Mixed up animal parts fly out of a cookie box and divide for children to put back together. The animal pieces are shades of gray. Once completed, the puzzle turns to vibrant colors

The sticker book shows different habitats and the animals that live there. Picking up an animal and placing it in its habitat will enable the children to see the animal interact in its natural habitat. If the animal is placed in an unnatural habitat, it will slide out and clues to its natural habitat are given.

Fall through a knothole in the picnic table to play a rousing board game where with the roll of the die, you can strengthen strategic thinking skills while building wild animals.

Brøderbund's **The Backyard** is available for $29.95 from Mac WareHouse, PO Box 3013, 1720 Oak Street, Lakewod, NJ 08701-3013; 800/255-6227.

Now Available

MACcessories: A Guide to Peripheral Devices for the Macintosh
$15.00

-PLUS-

Good Leads for Software Needs: Suggested Macintosh Software for Young Children
$15.00

Order Both for $25.00!!

Use order form on last page

Shareware Program a "Smashing Success"

by Jennifer Lucie

Baby Smash!®, a shareware program developed for the Macintosh by Justin Cohen, is a cause and effect program. The program begins with instructions to "smash away," and brightly colored geometric shapes and sounds flash on the screen simultaneously when any key is pushed. The program offers plenty of variety, as the response changes even when the same key is pushed repeatedly.

Each of the three attributes, sound, color, and overlapping capabilities, can be turned off by selecting Preferences on the Menu bar. Shapes are shades of gray when the color option is not selected. When overlapping capabilities are on, the shapes "stack" on top of another, but when that option is turned off, the shapes appear and disappear on the screen randomly.

Public domain and shareware resources are found on page 11.

Ke:nx® Set-ups for Switch and Alternate Keyboard Input for Millie's Math House

If you have young children who would enjoy Millie's Math House (Edmark), but need switch or alternate keyboard input, this disk is the solution to your problem. It contains 22 set-ups to be used with scanning skills. The other 10 set-ups are for alternate keyboard use. The disk and a copy of ACTT's Levels of Switch Progression and a reduced version of the graphics for Unicorn set-ups are available through Macomb Projects for $15.00. Use the order form on the last page of **ACTTive Technology** or fax a purchase order to Macomb Projects, 309/298-2305.

Software Prints Children's Stories in Banner Format

Toucan Educational Software offers **Banner Books**, software for the Apple II line. Children select a number of linked backgrounds and watch as they scroll by on the screen. Text and clip art from a selection of hundreds of graphics can be added to create books.

The books print out in a horizontal format in three printout sizes, from miniature to a big banner size that can be displayed as a border around the classroom. **Banner Books** can be printed up to 90 feet long!

Five titles are available, each costing $49.95: **Writing Across America ,On the Street Where You Live, Your School Day, All Along the Alphabet**, and **Hiking Through Habitats**.

A package containing all five titles costs $225. Titles are available on either 5.25" or 3.5" disks. Order from Educational Resources, 1550 Executive Drive, Elgin, IL 60123; 800/624-2926.

Calendar of Conferences

March 16-19, 1994: Technology and Persons with Disabilties Conference at the Los Angeles Airport Marriott Hotel. Contact Dr. Harry Murphy, California State University, Northridge, 18111 Nordhoff St., DVSS, Northridge, CA 91330; 818/885-2578.

March 17-18, 1994: ACTT V Technology Conference in Macomb, IL. Contact Project ACTT, 27 Horrabin Hall, Western Illinois University, Macomb, IL 61455; 309/298-1634.

March 30, 1994: Southwest Missouri Education and Technology Conference at University Plaza, Springfield, MO. Contact the Regional Consortium for Education and Technology, 13480 South Outer Forty Road, Ste. #101, Chesterfield, MO 63017.

April 6-10, 1994: "Achieving Exceptional Outcomes," Council for Exceptional Children's 1994 Annual Convention in Denver, CO. Contact CEC, 1920 Association Drive, Reston, VA 22091; 800/486-5773.

April 8-10, 1994: The New Learning Environment: Serving Diversity Through Technology in Albuquerque, MN. Contact the National Education Association, 1277 University of Oregon, Eugene, OR 97403-1277.

April 14-16, 1994: Northwest Council for Computer Education Conference 1994 in Spokane, WA. Contact NCCE '94, 1277 University of Oregon, Eugene, OR 97403-1277.

April 15-17, 1994: Technology, Reading & Learning Difficulties Conference in Baltimore, MD. Contact Educational Computer Conferences, 1070 Crows Nest Way, Richmond, CA 94803; 510/222-1249 or 800/255-2218.

April 21-23, 1994: The 35th Annual Conference of the California Transcribers and Educators of the Visually Handicapped in Costa Mesa, CA. Contact CTEVH, 741 North Vermont Avenue, Los Angeles, CA 90029-3594.

April 24-27, 1994: National Symposium on Information Technology (NSIT) 8th Annual Conference in Myrtle Beach, CA. Contact NSIT, Center for Developmental Disabilities, University of South Carolina, Benson Bldg., First Floor, Columbia, SC 29208; 803/777-4435.

Print Shop Deluxe Great Addition to Software Library

by Carol Schneider

Creating colorful, interesting newsletters, signs, letterheads, greeting cards, and calendars on your Macintosh is easy with **The Print Shop Deluxe.**

Similar to the **Print Shop** version for the Apple IIGS, **Print Shop Deluxe** makes a great addition to any Macintosh software library.

Create monthly classroom calendars using graphics as a way to remind children of important upcoming events. Text, as well as graphics, can be added to the individual cells in the calendar grid.

Customized fonts is a nice feature of the program. Twenty-one unique font shapes are offered as options, such as double arch or pennant shapes. Text style and fill, shadow style and fill, and color can be easily customized.

Importing graphics is done easily by copying and pasting, and objects can be resized without loss of quality. Graphics include 33 portrait backdrops, 20 landscape backdrops, 15 side fold spread backdrops, 12 top backdrops, 15 horizontal backdrops, 13 tile backdrops, 116 square graphics, 25 row graphics, 23 column graphics, 35 mini-borders, and 20 ruled lines.

Creations mades with **The Print Shop Deluxe** can be printed on laser printers or ImageWriter II printers. Print options include a Coloring Book (outline) mode, which helps save color ribbons.

Published by Broderbund, **The Print Shop Deluxe** can be purchased from Educational Resources for $54.95. It requires System 7.0 or higher, a hard disk with 6 MB free for installation, and 4 MB RAM.

ACTT V CONFERENCE PROMISES INFORMATIVE, PRACTICAL SESSIONS

What is the ACTT V Conference?

ACTT V is a small, informal technology conference which offers sessions and hands-on opportunities to learn about using computers and adaptive peripherals for young children with disabilities. The March 17-18, 1994 conference is the fifth annual technology conference is sponsored by Project ACTT (Activating Children Through Technology).

Who should attend ACTT V?

ACTT V is for anyone who desires information and training about assistive technology. Teachers, parents, program assistants, school and program administrators, and State Part H and 619 coordinators who wish to learn more about assistive technology applications for children ages birth through eight with disabilities are welcome to participate. We keep the conference small to provide personal attention, hands-on opportunities with the software and equipment, and plenty of networking opportunities among participants.

What sessions are being offered?

This year's sessions cover topics for parents and professionals who are interested in augmentative communication, integrating technology into the curriculum, and evaluating commercial and public domain programs. Session topics include:

Technology Applications In Early Intervention
Selecting Software for Technology Evaluations
Art and Technology: A Natural Partnership
Weaving a Rainbow: Weave Technology into Your Curriculum
Introduction to Interactive Media/CD-ROMs
Adult Productivity with Aldus Persuasion
Developing Literacy Skills Using the Computer
Using Videotechnology in Special Education
Connect Young Children with Ke:nx
Benefits and Barriers of Assistive Technology: Results of a Qualitative Study
Upstairs, Downstairs, All Around the Town -- discusses how technology can enhance opportunities for young children to grow through experiences in a community-based curriculum
There's A Mouse in My Classroom -- featuring the Macintosh LC and developmentally-appropriate software and activities.
Public Domain: An Affordable Alternative -- introduces numerous public domain and shareware programs that are affordable and appropriate for an early childhood program.
Switches Under Construction -- allows participants to construct their own switches (many kinds to choose from) or fix their broken ones
Software Preview Labs -- provides participants access to Macomb Projects' extensive library of commercial and public domain software. Programs may not be copied in this lab.
. . . and more!!!

continued on page 13

Adapting Macintosh Sotware **continued from page 4**

Newest Software Developments

One of the newest forms of software is the Compact Disc-Read Only Memory or CD-ROM. Since one disc can hold up to 656 megabytes of information, this type of software can have seemingless endless options with interactive features. **Just Grandma and Me** (Educational Resources) is one example of an interactive CD-ROM for young children. Based on the Mercer Mayer book, the software provides an exploratory format for interacting with objects and people in the story. As with other software, this CD-ROM can be adapted for switch or Unicorn Expanded Keyboard use through Ke:nx®.

Another exciting application for the Macintosh, which is also available for the Apple IIGS or the Macintosh is an authoring program known as **HyperStudio** (Educational Resources). This program allows you to create your own software specifically for a child's needs. Children can help by providing their drawings and voice for the software. Future versions of this program will include the option of switch accessibility.

Summary

The Macintosh LC has many exciting features which make it appealing and adaptable for use with young children with disabilities. The sound, graphics and speed make it suitable for the design of many computer activities. However, no matter what computer system you are using, it is the design of the activity itself that makes the technology a truly effective tool for young children. It is your creativity in combining the computer with off-computer materials that will help children meet their individualized goals. We encourage you to explore the possibilities that the Macintosh offers.

Resources

Ke:nx®, Multiple Switch Box and Unicorn Expanded Keyboard are available through Don Johnston Developmental Equipment, P.O. Box 639, 1000 North Rand Road, Building 115, Wauconda, Illinois 60084-0639, 800/999-4660.

Software is available from Educational Resources, 1550 Executive Drive, Elgin, Illinois 60123, 800/624-2926.

• •

ShareWare and Public Domain Software Resources

Center for Adapted Technology
Attn: Kitty Jones, Colorado Easter Seals
5755 West Alameda Ave.
Lakewood, CO 80226
303-233-1666

Creative Learning Choices
1451 Autumn Trail
Addison, IL 60101-5710
708-250-9745

Lehigh Valley Easter Seals Microcomputer Project
2200 Industrial Drive
Bethlehem, PA 18087
215-866-8092

R.J. Cooper and Associates
24843 Del Prado #283
Dana Point, CA 92629
714-240-1912

Technology for Language and Learning Special Education Public Domain Project
P.O. Box 327
East Rockaway, NY 11518-0327
516-625-4550
Catalog $10

Tell'em Ware
1714 Olson Way
Marshaltown, IA 50158
515-752-9667

InterNet

Assistive Technology Effects **continued from page 3**

grams but we don't know exactly what they are for and how to use them. I think that's kind of a problem when you buy a second-hand computer with all the stuff that comes with it...Starting new with a brand new one, it's just a little different than buying it second-hand."

Summary

Those participating in the study felt the children benefited by using assistive technologies. While children improved across most domains, they exhibited the greatest improvement in social-emotional development. However, both staff and families encountered many obstacles with the use of technology. In particular, financial and training factors affected the quality of technology services received by the children. Although these barriers exist, the enthusiasm displayed by staff and parents as they describe the children's interactions with technology demonstrate the valuable contribution it makes to the lives of children with disabilities.

Patricia Hutinger, Ed.D. is the Director of Macomb Projects, Principal Investigator of the Project discussed in this article, and Professor of Early Childhood at Western Illinois University. Sharon Hall is the Research Coordinator and Brenda Jameson is a Research Associate of the Project. For more information about the Project and its findings, please write 27 Horrabin Hall, WIU, Macomb, IL 61455 or call 309/298-1634.

There's something for you at the ACTT V Conference!

Exciting Sessions!
Great Door Prizes!
Good Food!

See pages 10 & 13 for more detail

BEST COPY AVAILABLE

New Macintosh Software Promotes Literacy Skills

Don Johnston Developmental Equipment has recently published two new Macintosh programs, **Storytime Tales** and **Circletime Tales. Storytime Tales** is based on Patty King-DeBaun's book Storytime. Emergent literacy skills are reinforced through activities that are commonplace to children: cooking (a character bakes a cake in "Forgetful's Secret"), laundry (children name and wash clothing in "Dirty Duds"), and body parts (children name body parts in "Bobby, Bobby, What Did You Do?"). Animated graphics, exciting sounds, repetitive text, and predictable stories make this program an excellent one to encourage students' involvement individually or as a group.

Circletime Tales is also for pre-readers. The program offers activities that reinforce concepts involving colors, counting, and directions. Included in the software are "Eency Weensy Spider," "Mary Wore Her Red Dress," and "Five Little Ducks." Once again, the graphics and sound effects are attention-grabbing and attention-holding, and the content encourages both individual and group involvement.

Both programs can be accessed either through the standard or an alternate keyboard,a Mac TouchWindow, a mouse, or a switch.

System requirements include a Macintosh computer with hard drive, System 7.0 or higher, 4 MB RAM, and a 256-color monitor. 2.5 MB should be available for the program.

Each program is $95.00. Order from Don Johnston Developmental Equipment, P.O. Box 639, 1000 N. Rand Road, Building 115, Wauconda, IL 60084. Phone 800/999-4660. Fax 708/526-4177.

VIDEOS HIGHLIGHT BEHAVIOR MANAGEMENT, TECHNOLOGY, GRANT WRITING, AND INCLUSION

Helping Children Manage Their Own Behavior, Can We Transform Early Childhood Education Through Technology?, The $ecrets of $uccessful Grant Writing, and **The Covered Wagon Crosses the Prairie Once Again: A Discussion on Inclusion** are four of the most recent videotapes offered by Macomb Projects' Project APPLES/R*TAS Regions I and III.

Helping Children Manage Their Own Behavior features Dr. Dan Detwiler, a licensed clinical social worker who counsels children with emotional and behavioral problems and their parents. Dr. Detwiler gives strategies for preventing behavioral problems, management techniques for helping children resolve their own problems, and alternative methods to discipline. His approach is geared to children ages 3 to 7.

Dr. Patricia Hutinger, Director of Macomb Projects, with Linda Robinson, Project ACTT Coordinator, and Dr. Robert Stoneburner, Research Analyst, discuss some results of Macomb Projects' research study, The Effective Use of Technology to Meet Educational Goals of Children with Disabilities. In **Can We Transform Early Childhood Education Through Technology?** these presenters discuss the barriers to and benefits of effective assistive technology use.

In **The $ecrets of $uccessful Grant Writing,** Sandra Heinzel Crews, Supervisor, Monitoring Unit, Department of Special Education, Illinois State Board of Education, presents practical advice for writing grant proposals and focuses on the process of completing a grant application.

The Covered Wagon Crosses the Prairie Once Again: A Discussion on Inclusion features Anne Shannon, the Statewide Parent Coordinator for the Regional Technical Assistance System (R*TAS) and the Illinois Technical Assistance Project (ITAP). She discusses inclusion and what it takes to make inclusion work in schools.

Each hour-long videotape is available for $49.95 from Project APPLES/R*TAS Regions I and III, 27 Horrabin Hall, Western Illinois University, Macomb, IL 61455. Fax purchase orders to 309/298-2305. Illinois residents should call Project APPLES at 800/227-7537 for Illinois' prices.

ACTT Schedules Summer Training

If one of your New Year's resolutions was a promise to integrate assistive technology into your classroom next fall, let Project ACTT help you get a good start. ACTT has scheduled its summer training sessions for June 6 - 10 and July 25 - 29. Each session still has openings for participants.

Each week-long training event involves opportunities to learn about Apple II and Macintosh equipment, adaptive peripherals, software, and ideas for curriculum integration.

Call ACTT's Coordinator, Linda Robinson for registration information. 309/298-1634.

Augmentative Communication Focus of ACTT V Keynote, Presentations

ACTT V, the 1994 annual early childhood technology conference sponsored by Project ACTT will feature Chuck Frame, a Speech/Language Pathologist in the Green Bay Public Schools and Assistive Technology Specialist for 63 school districts in Northeast Wisconsin. A longtime computer and electronics hobbyist, Mr. Frame designed and built a digital voice record/playback device which became the prototype for SpeakEasy, now manufactured and marketed by AbleNet.

Frame's keynote address will discuss the history and future of augmentative communication devices. He will also present on two topics: **Do Low Cost Voice Output Communication Aids Really Exist?** and **High-End Voice Output Communication Aids: Dynamic vs. Static Devices.** The first presentation will introduce "Voice-in-a-Box," a portable communication device which can be built for under $100 in less than four hours. One hundred twenty-five non-speaking children in Northeast Wisconsin are successfully using this device.

Frame's second presentation will compare and contrast the features of static and dynamic communication devices (MinSpeak, Liberator, DynaVox) and will discuss which system is most appropriate for a given user based on his/her access mode, language level, memory constraints, and visual scanning abilities.

Frame will be available throughout the conference to answer questions.

ACTT V **continued from page 10**

When and where will ACTT V be held in 1994?

ACTT V will be held on March 17-18, 1994 in Horrabin Hall on the Western Illinois University campus in Macomb, IL. The conference begins each day at 8:30 am with registration and breakfast. Sessions begin at 9:00. Most sessions last an hour and a half; some hands-on sessions are 1/2 day sessions. The conference ends about 4:00 each day. Breakfasts, lunches, and sodas during breaks are included in the registration fee.

How can I be a part of ACTT V?

Just fill out the registration form below and send it with your registration fee to ACTT V, 27 Horrabin Hall, Western Illinois University, Macomb, IL 61455. Join us for a great conference! You'll be glad you came.

ACTT V Registration Form

Name ______________________ Agency ______________________
Address ______________________ City ______________ State ________ Zip ________
Phone where I can most easily be contacted ______________________

Registration fees include continental breakfasts and luncheons each day.

Regular Registration
- ______ $50 enclosed for the two-day conference
- ______ $30 enclosed for Thursday, March 17 only
- ______ $30 enclosed for Friday, March 18 only

Special Deals:
- ______ $30 enclosed (per person) for registration of ACTT Replication site personnel
- ______ $40 enclosed per person for a Group Registration (four or more people from the same agency.)

Parents of young children (0-8) with disabilities
- ______ $30 enclosed for the two-day conference
- ______ $15 enclosed for Thursday, March 17 only
- ______ $15 enclosed for Friday, March 18 only

___ **Check if you require special accomodations**
What accomodations are requested: ______
____
____

Send all registration forms together with payment or purchase order.

Registrations after March 4, 1994 are $65 for two days; $45 for one day.

Questions? Call 309/298-1634. Ask for Joyce

Your payment or purchase order must accompany registration. Phone registrations are not accepted. Make checks and money orders payable to Macomb Projects (U.S. Funds only, please) Send payment and registration form to ACTT V Conference, 27 Horrabin Hall, Western Illinois University, Macomb, IL 61455.

Videotape Provides Information, Ideas About Macintosh Technology for Young Children

Are you thinking about replacing your classroom Apple II equipment with a Macintosh LC? You'll find some good ideas to help you integrate Macintosh programs into your curriculum in **The Latest Technology for Young Children**, a twenty-two minute video tape produced by Project ACTT.

Linda Robinson, ACTT's Coordinator, and Carol Schneider, Curriculum Development Specialist and Trainer for the Project, discuss the features and advantages of the Macintosh LC.

The videotape offers a preview and demonstration of some popular developmentally-appropriate Macintosh software for young children, shows footage of young children with disabilities using the software and equipment, and offers many ideas for off-computer curricular activities related to various software programs.

The Latest Technology for Young Children is available for $50. To order it, use the form on the back page of this newsletter or send a purchase order to Macomb Projects, 27 Horrabin Hall WIU, Macomb, IL 61455.

ACTT V CONFERENCE

Have you registered yet?

Don't miss out on our informative sessions, creative ideas for technology integration, and opportunities to share ideas with others!

MARCH 17 - 18, 1994

Iowa Company Offers Public Domain Programs for Apple, IBM, and Mac

Tell 'em Ware in Marshalltown, IA offers public domain/shareware software for the Apple, IBM, and Macintosh computers. The charge per disk is $6.50, which covers copying, shipping and handling. The fee is lowered to $5.00/disk if 10 or more disks are ordered at the same time. The company accepts purchase orders and there is no minimum order required.

By April 1994, the company will have a CD-ROM available with over 250 magabytes of Macintosh shareware and public domain programs.

For a catalog or further information, contact Bob Kerr, Tell 'em Ware, 1714 Olson Way, Marshalltown, IA 50158; 515/752-9667.

Professional Competency Lists Available from DEC

Compilation of Professional Competencies for Early Intervention Personnel is available from the Division for Early Childhood (DEC). DEC says it is an "excellent resource for early intervention professionals, administrators, policy makers, and personnel preparation programs."

The suggested interdisciplinary and within-disciplinary competencies are for the following professions: audiology, medicine, nursing, nutrition, occupational therapy, physical therapy, psychology, social work, and speech and language pathology.

The complete set of competencies bound in a vinyl binder are $20 + $4.50 shipping and handling for DEC members and $30 + $4.50 for non-members. Payment must accompany order.

Order from DEC Executive Office, 2500 Baldwick Road, Suite 15, Pittsburgh, PA 15212.

***Learning Tools* continued from page 7**

school curriculum in the same ways that standard materials are used, the computer, peripherals, and software become a center, just like the writing center, the block center, the art center, or the dramatic play center, where children can play, discover, create, imagine, develop concepts and improve skills.

Computers are extremely effective tools for young children's learning since they have endless patience. Quality software programs with developmentally appropriate activities for young children are appearing more frequently in the marketplace. Such software varies one attribute at a time, allows children opportunities to discover, presents concepts in fun and interesting ways, and offers exciting sounds, graphics, and animation. Even if a particular software program that sounded great in the ad turns out to be a "dud," a creative teacher can invent interesting ways that children can use the software to meet individual educational objectives. With authoring programs such as HyperStudio, teachers have exciting opportunities to create their own software to meet children's needs.

Technology for young children with disabilities is a "go for it" opportunity. There may be barriers in your school against technology integration, but you mustn't give up. Technology is in our lives to stay, and its benefits for children with disabilities have been proven.

This article was based on ACTT's Philosophy Statement in **Building ACTTive Futures: ACTT's Curriculum Guide for Young Children and Technology.*

Simple Switch Software Records Child Progress

Macomb Projects has software available for Apple II computers and Macintosh computers which use a IIe emulator card. Use the order form below to order these and other products. A catalog is available upon request.

Switch 'N' See

This program helps reinforce understanding of cause and effect in a cognitively young child. When a switch is pressed, a rag doll appears on the monitor and dances to "Skip to My Lou." The doll dances as long as the switch is activated.

The program has record-keeping capabilities. Number of seconds between switch presses, number of switch presses, and number of notes played are recorded. Records may be printed. The program costs $11.95.

Master Blaster

This game for two players reinforces visual attending with a switch response. A "beep" may be added as an auditory cue for the child.

A rocket ship appears on the screen and the child who presses his/her switch first launches the rocket. **Master Blaster** keeps track of who pressed the switch first and how many times each child launched the rocket. After each launch, the children are told who launched the rocket.

If a child tries to get an "edge" on his opponent by holding his switch down before the rocket appears on the screen, the program says, "(Child's name), release the switch." This is repeated until the press is released.

Master Blaster ($11.95) is used with the Echo Speech Synthesizer.

Simple Switch Activities

The program ($11.95) includes four activities which can be used to train switch use for cause-effect relationships. The record-keeping information includes number of presses, duration of press, and elapsed time between presses. Time is recorded in seconds to give you accurate documentation for measuring skill acquisition.

MACOMB PROJECTS' COMPUTER PRODUCTS ORDER FORM

Name/Agency ____________________

Billing Agency ____________________

Shipping Address ____________________

Billing Address ____________________

City ____________________

State/Zip ____________________

Phone (   ) ____________________

Date of Order ____________________

Products	Price	Quantity	Total

MAKE CHECKS PAYABLE TO MACOMB PROJECTS

SHIPPING ____________

TOTAL ____________

Your check or purchase order must accompany the order. Purchase Orders may be faxed to 309/298-2305. No phone orders accepted. Materials are shipped parcel post unless other arrangements are made. Please allow four to six weeks for delivery. Prices are subject to change without notice.

Orders from outside the U.S. must be paid in U.S. funds drawn from U.S. banks. Allow additional time for shipment.

ACTTive Technology Subscription Form

Name ______________________________

Agency ______________________________

Street Address ______________________________

City ____________________ **State** __________ **Zip** __________

For a year's subscription to *ACTTive Technology*, complete this form and return it with a purchase order or check for $16.00 to Macomb Projects, 27 Horrabin Hall, Western Illinois University, Macomb, IL 61455.
Orders from outside the U.S. must be paid for in U.S. funds drawn from U.S. banks.

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ACTTive Technology

Project ACTT, Western Illinois University, Macomb, IL 61455

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VOLUME 9, NUMBER 2
Spring 1994

ACTT V Keynote Speaker Reviews History, Predicts Future of Assistive Technology

Editors Note: Charles Frame, Speech/Language Pathologist and Assistive Technology Specialist for the Green Bay School District, presented the Keynote Address at the ACTT V Conference in March, in which he outlined important people and events in the history of assistive technology. Numerous conference participants asked to have copies of his speech, and Chuck graciously gave ACTT permission to print it in this issue of ***ACTTive Technology.***

I'd like to thank the staff of Project ACTT for inviting me to address you at this fifth annual Activating Children Through Technology conference.

"Activating Children Through Technology"—I like that phrase. To me, those words paint a mind-picture of children with disabilities in classrooms all across the United States who are being enabled through technology to do things that would have been impossible for them just a few short years ago. Isn't that what assistive—or enabling—technology is all about? Perhaps Dr. Alan Brightman, head of the special education division at Apple Computer, said it best. Speaking of the ability of the computer to augment the human mind, he said, "Computers can assist ordinary people to do extraordinary things." And speaking of persons with disabilities, he said, "Computers can also assist extraordinary persons to do ordinary things."

Someone else described computers as "wheels for the mind." Thinking back 5000 years in human history to the invention of the wheel, what the wheel did for transportation, the computer, a relatively recent innovation within our lifetimes, is doing to augment cognition.

The history of the field of special education technology and rehabilitation may be divided into two distinct eras—B.C. or Before Computers, and A.D. or After Digital, that is, after the digital computer revolution.

Think about the technology that is making a difference in the lives of persons with disabilities today: speech technology, both synthesized speech and digitized or recorded speech; dedicated portable voice-output communication aids; desktop computers—the Apple II, Apple IIGS, Macintosh, and IBM—how could we get along without them? They are the backbone of what we do; adaptive input devices such as the Adaptive Firmware Card and Ke:nx, paired with expanded keyboards and switches; switch-operated toys and environmental control units; optical head pointing devices; reading machines for the blind; laser canes and other high-tech mobility aids for the visually impaired; multi-channel cochlear implants for the deaf; and the list goes on and on.

Charles Frame, Assistive Technology Specialist for the Green Bay School District and creator of the "Voice-in-a-Box" augmentative communication device, delivers the ACTT V keynote address.

But rather than try to enumerate all the technology that is being used in the rehabilitation field today, I thought it might be interesting to take a look back at where all this technology came from. You may be surprised to know that the overwhelming portion of the technology that we commonly use with our disabled clients was originally developed for other purposes. In most cases, the inventors and innovators who conceived these technologies never had the slightest idea that their innovations would be used to make life easier for handicapped persons. And if you could show them today how the technology is being used in rehabilitation, they would be astounded.

Let's take a trip back to 1975—the year generally considered to be the beginning of the personal computer revolution. It started in Cupertino, CA with two guys named Steve. Steve Wozniak was a junior in college, and Steve Jobs was a sophomore. Working

continued on page 3

From The Editors. . .

by Linda Robinson

As we close the curtain on ACTT V, we once again feel rejuvenated, having exchanged ideas and technology stories with many participants from surrounding states. I have to say on our behalf that all of the Macomb Projects staff did a great job in making this year's conference the most successful yet. We also attribute part of that success to our outside presenters, including our keynote speaker, Chuck Frame. Chuck gave a very insightful opening address. If you missed the conference, you can still enjoy Chuck's speech in written form here. It provides a perspective on how we have gotten to where we are today in technology, and where we are hopefully heading in the future. It makes you realize what a valuable part we play in this revolution!

Another big hit at the conference was a session on Fripple activities. Everyone in our office has gone Fripple crazy! If you don't know what a Fripple is, then you have not seen **Thinkin' Things** by Edmark. After reading about all the Fripple possibilities in this issue, I'm sure you'll be anxious to see the program. It's good for many skills, especially problem solving. The activities with Fripples give you ideas on how creative you can be with any software. When you look at a program, let your imagination go wild. Better yet, brainstorm with a group of people and you'll find the possibilities are endless.Use the Fripples ideas in this issue as a starting point; then take your favorite program and begin to create. You may be amazed at the number of off-computer activities you can design around one software character or theme. And think of all the different skills you are helping children achieve through this one program.

The Fripples mania actually started during our last ACTT training session. Curriculum integration is a major focus during our training. Throughout the week individuals or groups plan activities around a software program. Besides learning the basics of computer operation, participants learn how to develop off-computer materials using computer graphics if desired. They leave Macomb with a set of activities and materials which can be used with an individual child or classroom. If this sounds interesting, you may want to register to join us for June or July training. Spend a week learning everything you wanted to know about computers and take home materials to use with your children.

As a follow-up to training, we are invited to visit our ACTT sites. These visits are one of the most enjoyable parts of our job. The featured site in this issue is the Early Intervention Program in Sheboygan, Wisconsin. We had the pleasure of visiting them recently and we were impressed by the administrative support for technology in their program. That support combined with computer training is the key to a program's successful integration of technology into their curriculum. We are proud to add EIP to our list of ACTT sites. If your program would like to be more successful in technology, you may want to consider joining us in Macomb this summer for training. You can learn first-hand what a Fripple is, how to make one, and maybe even how to become one!

Table of Contents

ACTT V Keynote Address 1
From the Editors 2
New Overlay Maker 3
Inclusion Through AT 3
Putt Putt Software Review 4
New HyperStudio Mac 5
Appleworks Revised 6
Eensy & Friends Software Review 6
Curriculum ACTTivities 7
Software Resources 8
IDEA Resource 8
Calendar of Conferences 9
Funding Resource 9
Resource Directory 9
Unicorn Products Sale 9
Fripple Fun Review 10
Ke:nx Setup for Fripples 10
Fripple Curriculum Activity 11
Fun with Fripples 11
Sing Along with Fripples 13
ACTT Summer Training 13
ACTTive Teachers 14
ClarisWorks Tips 15
Innocomp Switches 15
NICHCY IDEA Resource 17
New RJ Cooper Software 17
Ke:nx Setups for Millie 17
Ugly Duckling Review 18
Sammy and Words Reviews 18
Switch Software 19
ACTTive Technology Subscription Form 19

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309/298-1634
Subscriptions are $16 per year

ACTT V Keynote **continued from page 1**

in a garage, they built a home-made computer that they mounted in a briefcase they ripped off one of their dads. This computer did something revolutionary for its day—it used an old black and white TV set to display its data in alphanumeric form on the screen. Before then, home computers built from kits had only panels of red blinking lights that flashed their data in patterns of binary code. If you didn't know how to read the code, you had no idea what the computer was telling you. You had to be very familiar with base 2 math!

The two Steves took their computer to a computer user group meeting one night and demonstrated it. The response was overwhelming—everyone wanted to buy one. Deluged with orders, the two Steves decided to put their college educations on hold. They put together some venture capital and in 1976, Apple Computer Corporation was born. In the past 18 years, we have seen the original Apple give way to the Apple II; II Plus; IIe; the ill-fated Apple III; the Lisa, which was the forerunner of the Macintosh; the Macintosh II line, the Macintosh LC line; Macintosh Powerbooks; the Quadras; the Apple Newton line of personal digital assistants; and a new line of Power Macintosh computers. Any of us who have used any of these computers, either for our own personal use or with our clients, owe a debt of gratitude to two guys named Steve working out of a garage in Cupertino, CA.

Back in 1981, Judy MacDonald, an Occupational Therapist in Seattle, WA, was using some of these early Apple II's in rehabilitation with some of her clients. She quickly discovered that she needed an alternative keyboard for clients who had poor motor skills. She also needed a single switch for scanning. So she teamed up with an electrical engineer named Paul Schweda, and they developed the Adaptive Firmware Card. Along the way, they teamed with a young company, Unicorn Engineering, and the Unicorn Expanded Keyboard was developed primarily as an alternative keyboard to be used with the AFC. They added other input modes such as Morse Code, and kept improving the software. When the Apple IIGS came out in late 1986, they developed the AFC G-32 and added extensive mouse emulation capabilities.

In 1988, Don Johnston Developmental Equipment, Inc. took over development and marketing of the AFC. Riding on the pioneering work of MacDonald and Schweda, Don Johnston launched an R & D project that resulted in the development of the Ke:nx and Ke:nx On:Board for the Macintosh. Taking advantage of the advanced capabilities of the Macintosh, they added digital speech input/output and embedded graphics and overlay printing capability, as well as ASCII input mode for dedicated communication devices and the On-Screen Keyboard method. How could we get along today without our Macintosh and our Ke:nx?

Back in the early 1960's a musician and engineer, Raymond Kurzweil, was beginning to experiment with electronic music. He did the early pioneering work on electronic tone generators and filters which led to the development of synthesizer keyboards—such as the Yamaha and Casio—capable of duplicating the sounds of dozens of musical instruments.

Utilizing the technology he developed for generating electronic music, Kurzweil experimented with the generation of the phonemes or speech

continued on page 4

Book Supports Inclusion Through Assistive Technology

A 201 page paperback distributed by the Special Needs Project, *Meeting the Special Needs of All Students*, supports inclusion through assistive technology. This book is actually the second edition of Mary Male's *Special Magic*, a hands-on guide for using computers in the classroom. An invited team of parents, educators and assistive technology experts contributed to the new edition. The book is committed to nondiscriminatory full inclusion. It can be ordered for $38 from Special Needs Project, 3463 State Street, Suite 282, Santa Barbara, CA 93105-2603; 805/683-9633; FAX 805/683-2341.

New Version of Overlay Maker Contains Time-saving Features

Now creating custom overlays for IntelliKeys is even easier with Overlay Maker 2.1. You will be able to print on any size paper you like. You can save an overlay as a PICT file and use it within a drawing program. You can now use any size font and put text labels above or below your pictures. You can enter all of the keys on a 101-key keyboard including *Enter*, *Home* and *Delete*. Many special characters can now be entered directly from the keyboard. A large selection of sample overlays is included to help you start designing your own.

If you purchased IntelliKeys Overlay Maker for the Mac, you can upgrade to Version 2.1 for only $20, plus $4 for shipping and handling.

More information is available from IntelliTools, Inc., 5221 Central Ave., Ste. 205, Richmond, CA 94804; 800/899-6687.

ACTT V Keynote **continued from page 3**

sounds of English using the same tone generators and filters. His work led to the first generation of commercially available speech synthesizers that were capable of performing text to speech synthesis on personal computers, such as the Echo and Votrax. These gave way to a much-improved software called SmoothTalker, which in turn gave way to DecTalk, a highly intelligible medley of synthesized voices originally developed for reading machines for the blind. DecTalk subsequently became the standard for voice-output communication aids, such as the TouchTalker, Liberator, and DynaVox.

The military also had a hand in developing what became one of the more exotic of the enabling technologies. In the early 1970's the Air Force was experimenting with jet fighter cockpit navigation systems. The control panel in jet cockpits had proliferated to over 200 different controls. However, the most a pilot could operate at one time was four—one for each hand and one for each foot. So the Air Force developed a head tracking technology so a fighter pilot could operate more controls by simply moving his head forward and back, and side to side.

In 1986 this technology appeared in the form of the View Control System (VCS) for the Macintosh. The VCS was originally intended for secretaries who were new to using the Macintosh and who had never used a mouse before. Secretaries, it was found, did not like having to give up a square foot of their desk tops for a mouse. The VCS was developed so secretaries could keep their hands on the keyboard at all times and guide the mouse cursor around the screen simply by moving their heads.

Secretaries did not especially like these devices, and not a lot of them were sold. However, the company which manufactured the VCS, Personics Corporation, noticed that a disproportionate number of their sales were going to rehabilitation agencies. Now, I suppose they did a little investigation and found that they had unwittingly created the most innovative alternative input device ever devised for quadriplegics. They pulled the product off the market and repackaged it, changing its name to HeadMaster, and began marketing it exclusively to the rehabilitation field. The price increased from $199 to $1000!

After about a year, Prentke-Romich Co. bought out the HeadMaster division from Personics. Unfortunately, they did not lower the price; today the

continued on page 5

Software Review:

Putt Putt + Children = Learning and Fun!

By Jennifer Lucie

Preparing for a parade is hard work! That's why Putt Putt needs help. **Putt Putt Joins the Parade** by Humongous Entertainment provides a wonderful opportunity for preschool aged children to go on a scavenger hunt. The CD-ROM is an interactive environment where children can learn and play games on their way to finding the balloon, a pet, and earning enough money for a car wash.

The program begins in Putt Putt's garage on a sunny morning when he learns about the annual Cartown Pet Parade. Putt Putt then gets ready for the day by brushing his teeth and eating his Tire-O's. His good friend, Smoky the Fire Engine tells him what he needs to join the parade then suggests he try mowing yards and delivering groceries to earn money for his carwash. Children engage in problem solving because it's not always easy to get to where you are going and many times Putt Putt needs help. The items needed for the parade can be found in any order, but some things are needed to achieve others, for example, money to pay for the carwash. Putt Putt leaves town and can choose between five streets to find what he needs. Three of the streets are called Red, Blue, and Green Streets, and are the same color as their name. The other two streets differ in that one is a paved road and one is a dirt road. It is on these streets that children get to meet other members of the community as Putt Putt tries to attain what he needs for the parade. The vehicle characters each have different houses and voices, showing the diversity found in many communities today. When Putt Putt goes to the movie theater, he meets Ms. Airbags who lost her son, Baby Beep, and Putt Putt is glad to help her find him. The child matches a different Baby Beep each time the game is played. When the balloon, the pet, and the carwash are taken care of, then Putt Putt leads his other car friends in the Pet Parade. Children can still interact with the program during the parade by simply clicking on different cars and their pets.

Humongous Entertainment's **Putt Putt Joins the Parade** is available for $44.95 from Educational Resources, 800/624-2926.

***ACTT V Keynote* continued from page 4**

HeadMaster sells for around $1600. The price is worth it.

A few years ago, a promising young black musician named Jimmy Wilder was in a near-fatal automobile accident which left him a quadriplegic. Within a few months of the accident, Jimmy Wilder was using a Macintosh and a HeadMaster and was back composing music. In 1989, a 17 year old high school student in Green Bay, Wisconsin, who had muscular dystrophy, was ventilator dependent, and weighed just 39 pounds received a Macintosh and a HeadMaster. Despite needing 24-hour a day medical care, he finished high school a National Honor Society student and received a four-year scholarship to St. Norbert College. He is now finishing his junior year at St. Norbert in pre-law, carrying a 4.0 average. His goal in life is to become a legal advocate for persons with handicaps. He says that without his Mac and HeadMaster, it would not have been possible for him to go to college.

In 1983, a young 24 year old programmer on the Macintosh development team at Apple was given the task of developing a paint program which would be packaged free with every Macintosh. Bill Atkinson programmed MacPaint, and put in it powerful drawing and painting tools the likes of which had never been seen on any computer—even high-end workstations. He also programmed a little desk accessory for the first Macs, a rolodex-like card file. The card file analogy stuck with him and he played around for a couple years on his own with an idea that would integrate MacPaint with the card file metaphor. He played around with developing buttons which, when you click them with the mouse, would cause a picture or text box to pop up on the screen or would play a recorded sound or speech or go instantly to another card in the stack.

Bill Atkinson envisioned an easy-to-use programming environment which novice Macintosh users—persons who had no interest in learning a traditional programming language—could use to quickly develop their own custom programs. He called his tools a "software erector set." The name of the program he created? HyperCard.

HyperCard gave birth to the multimedia revolution. HyperCard was quickly superseded by SuperCard which had a full color environment. Professional development tools soon became available—Macromind Director and AuthorWare Professional.HyperStudio appeared for the Apple IIGS and last summer became available for the Mac. Eventually, multimedia authoring tools became available for the IBM, such as LinkWay, ToolBook, and Compel. These programs provided a development environment for creating educational interactive multimedia software, which soon began to appear in droves.

The size of most multimedia programs soon began to outstrip the capabilities of floppy disks, but CD-ROM—which can store the equivalent of 780 800K floppy disks—proved to be the ideal medium. Soon, we began to see entire encyclopedias on one CD, with thousands of color pictures, sound clips, animations, and one hour of live action video with sound tracks. Multimedia, which can engage all the senses and deliver a high degree of interactivity, promises to revolutionize educational instruction.

continued on page 6

Congratulations Diana Weller, Waterloo, IL, winner of the 1994 ACTT V Conference Evaluation Drawing! Diana chose *Having Fun Together* as her prize.

ROGER WAGNER PUBLISHING RELEASES HYPERSTUDIO MAC VERSION 1.1

The new version of HyperStudio for the Macintosh has "more than a few menu changes," according to Roger Wagner. It contains elements that are in the 3.1 GS version along with some additional features. One significant new feature is the support of multiple screen sizes. Users can adjust the card size to fit their needs. HyperLogo, a scripting language, has been updated, and Animator NBA has been included on the new version.

Other new features
- Group objects
- Transparent text fields
- No-click buttons
- Drop-in buttons
- Draggable graphics
- Live video support with vdig & digitizer
- Quicktime options dialog box
- Add Quicktime to card option
- Disk based text & graphics
- Scale & rotate graphics
- Option for moving selected graphic one pixel at a time
- Text style button in text info dialog box
- Left/center/right justification in style dialog box
- Option to launch documents & applications
- Laserdisc port chooser extra
- Options for converting stack size or number of colors
- BlabberMouth MBA
- TouchWindow support

If you already have the original HyperStudio Mac, the upgrade is free. Otherwise, it costs around $125. One source for HyperStudio products (clip art, sounds, etc.) for either the Macintosh or the IIGS is HyperStudio Network, Box 103, Blawenburg, NJ 08504; 609/466-3196.

ACTT V Keynote **continued from page 5**

So, where are we going? We now have the technology to assist the overwhelming percentage of people with disabilities to reach their highest level of potential. So why isn't it happening everywhere? The technology-related assistance amendments of 1992 to IDEA mandate the provision of assistive technology services by school districts to ALL handicapped children. But many school districts are scared to death of the costs. School districts are under heavy taxpayer pressure to hold the line on costs. And many school district superintendents and school boards see the heavy costs of Special Education as ALREADY being partly responsible for their financial woes. And so, in spite of the mandates, there is a lot of stonewalling going on, and handicapped children are being denied assistive technology.

You know, about 31 years ago, a minority in this country that had been denied equal rights and equal access decided that they would tolerate it no longer. And a black preacher addressing a civil rights rally delivered perhaps the most stirring, moving, inspirational speech ever given in history. Dr. Martin Luther King Jr. mobilized both black and white to work together to end discrimination and strive for civil rights with his "I have a dream" speech. He said, "I have a dream. I have a dream that someday, all of God's children will be judged by the quality of their character and not by the color of their skin. I have a dream..." And his dream changed the course of history.

But there is still a minority in this country that is largely being denied equal rights despite legislation to the contrary. This minority cuts across all ethnic and racial lines, and it cuts across all economic strata.

Well, I have a dream, and I know I speak for all of you as well. I have a dream that someday, all of God's children who were born with disabilities or who acquired disabilities through accident or disease, will be judged by the quality of their character, and not by the outward visual appearance of their handicap.

I have a dream that someday, all of God's children who were born with disabilities or who acquired disabilities through accident or disease, will be judged by the quality of their character, and not by the outward visual appearance of their handicap.

I have a dream that someday, everyone who needs assistive technology or augmentative communication will have access to that technology.

I have a dream that someday, every teacher and every aide in every school across the country will have the necessary training to be able to successfully integrate children who are using assistive technology into their classrooms.

I have a dream that someday the cost of assistive technology and augmentative communication devices will drop to the point where they will be universally affordable to all.

I have a dream that all of this is going to happen—and it's going to happen because of the efforts and hard work of dedicated people like you!

May God richly bless you for your efforts on behalf of his very special children. Thank you.

--Charles Frame
March 7, 1994

Switch-training Program Emphasizes Cause and Effect Activities

Eensy & Friends is a new single switch program for the Macintosh that features fun characters from **Circletime Tales**. But instead of stories and rhymes, the characters are involved with cause-and-effect activities.

Use **Eensy & Friends** for switch training with the Macintosh Switch Interface. A switch press initiates many actions. Ducks swim and count. Mary gets dressed and Eensy climbs out the spout.

The program requires Macintosh LC or higher with System 7; 4 MB RAM and a hard drive with 3 MB free disk space; and a 256-color monitor.

Available from Don Johnston, Inc., **Eensy & Friends** sells for $65. Call 800/999-4660 or 708/526-2682. Fax 708/526-4177.

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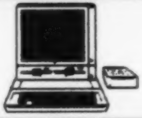
Appleworks Revised Version 4.0 Now Available

Teachers using the Apple IIe will be happy to learn that there is a revised version of **Appleworks, Appleworks 4.0**, now on the market. The revised version features enhanced integration, a pop-up list of functions in the spreadsheet modules so users don't have to remember codes, symbols for formatting codes in the word processor, an Auto-Save function, and a built-in paint program.

Appleworks 4.0 comes with a free video and a 30-day, money back guarantee from Quality Computers, St. Clair Shores, MI; 800/777-3642.



Curriculum ACTTivities

Sounds Around Me

Content Area: Causality, Sound Recognition, Sound Imitation

Child Objectives:

1. Press switch to hear sound.
2. Identify sound.
3. Relate sound to object producing it.
4. Imitate sound.

Materials:

Macintosh LC series computer with Color Monitor
(4 MB RAM with System 7.0 or 2 MB RAM with System 6.07/6.08)
Switch Intro (Don Johnston) - "Make It Sound"
Macintosh Switch Interface
Switch
Switch Holder (optional)

Off-Computer Activity:
Assemble a group of toy objects similar to those which appear as pictures in the program. Design activities around the objects focusing on the sounds which they produce. Talk about the sounds, relating each sound to the object which produces the sound in the environment. Talk about similar sounds the children may hear at home. Encourage the children to imitate the sound.

A book can be made with pictures printed directly from the program. Each screen can be captured as a "Picture" by pressing Command-Shift-3. The captured image is saved as a "Picture" on the desktop. The picture must then be placed in a graphics program, such as **ClarisWorks** (Claris), to be printed. The picture book can be used with a group of children or on an individual basis, to familiarize the children with the objects they will later see on the computer. A variety of activities can be designed around the toy objects and the picture book.

Computer Activity:
Position the monitor on a low table with the keyboard out of the child's visual field. To limit distractions, cover the pieces of equipment that are not being used by the child. Place a suitable switch in a stable position on the table in front of the monitor (or on the child's wheelchair tray). Have the group of toy objects within easy reach to use during the activity.

Boot the program, **Switch Intro**, and select "Settings." Set the switch input for one switch use and set other options appropriately. Select "Making Sounds" from the picture menu.

Encourage the child to explore the switch and press it to hear a sound. Talk about what the sound is and how it relates to the picture on the monitor. Offer the child the toy object with which similar sounds can be made. Design the activity to be exploratory so that the child can play with the toy and press the switch to hear the sound as often as he wants.

continued on page 8

Curriculum Activity **continued from page 7**

To test the child's understanding of causality, ask him how to make the sound (from the computer) again. Observe his switch pressing behavior. When he seems to tire of one object, ask him if he wants another picture. To change to a new picture, press the number 3 on the keyboard. Repeat the activity offering corresponding toys to pictures on the monitor.

If the child is hesitant to press the switch provide physical assistance or model switch pressing for him.

Variations:
This activity can be designed for choice-making, by selecting the Two Switches option in the program's "Settings." By pressing one switch the child can hear the sound. With a press on the second switch he can change to a new picture. In this way the child controls which sound and picture he wants.

The Two Switches option can also be selected with the adult controlling the switch for the picture change while the child controls the switch for sound change. This arrangement insures sufficient time on each picture to talk about the object and sound. Otherwise, with very young children rapid switch pressing may defeat the purpose of the activity. Repeated picture and sound change which results from rapid switch pressing does not allow sufficient time to focus attention on any one picture. Also with random switch pressing the child may not understand his own causality of the rapid changes on the monitor.

Adaptations:
Motor Impairment: Select an appropriate switch and placement to meet the child's individual needs.

Visual Impairment: Focus attention on the sounds in the program. Since the sounds are actual recorded sounds from real objects, most of them will be easy for children to identify. For older children, braille images of the pictures could be used in the book about sounds.

Auditory Impairment: Use signs when talking about the pictures on the screens and the toys.

Software Resources

MicroMedia Publishing Company's 1994 catalog is now available. Prices on academic software are 40-70% off publishers' retail prices!

Videodiscs and CD-ROMs are available on 30-day approval to schools and colleges.

Call 800/292-1997 to order a free catalog.

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kidTECH offers five Macintosh software packages for children: **Old McDonald's Farm, Five Little Ducks; Best of kidTECH; My Action Book**; and **Make It Go**. Access is available with mouse, TouchWindow, single switch scan; IntelliKeys overlays; and Ke:nx setups.

Call kidTECH for a brochure: 805/872-3800; fax 805/871-9679.

NICHCY Document Excellent IDEA Resource

The National Information Center for Children and Youth with Disabilities' (NICHCY) 15-page September 1993 **NICHCY Digest**, which looks closely at the mandates and requirements of IDEA, is an excellent source for parents and professionals who seek to understand the law supporting special education and related services for children and youth with disabilities.

The document gives readers a short history of IDEA and explains how to receive a copy of IDEA and its regulations. It also explains the purposes of IDEA, eligibility for services, and types of services allowed under the law. The third section of the document describes how to access services and explains the evaluation process. The Individualized Education Program (IEP) is discussed in the fourth part, and the fifth part outlines procedural safeguards. Resources and references are listed, as are IDEA's definitions of disabilities. All in all, this is a valuable resource for anyone who wants a easy-to-understand explanation of IDEA.

A single copy of the September **NICHCY Digest** is available free from NICHCY, P.O. Box 1492, Washington, DC 20013. Also available is a list of other NICHCY publications.

Calendar of Conferences

June 8-10, 1994: Virtual Reality and Persons with Disabilities (CSUN's Second Annual Conference) at the San Francisco Marriott Hotel. Contact Dr. Harry Murphy, California State University, Northridge, CA 91330, 818/885-2578.

June 13-15, 1994: National Education Computing Conference in Boston, MA. Contact NECC '94, International Society for Technology in Education, 1787 Agate Street, Eugene, OR 97403-1923; 503/346-2834.

June 17-22, 1994: RESNA '94, "Tuning in to the 21st Century Through Assistive Technology: Listen to the Music," in Nashville, TN. Contact RESNA, Suite 1540, 1700 N. Moore St., Arlington, VA 22209-1903;703/524-6686.

June 25-29, 1994: World Conference on Educational Multimedia and Hypermedia in Vancouver, Canada. Contact Association for the Advancement of Computing in Education, P.O. Box 2966, Charlottesville, VA 22902.

August 18-19, 1994: Celebrate First Steps into the Future in Erlanger, KY. Contact Janet Fugate 502/745-3711 or Carol Schroeder 606/257-1135.

September 21, 1994: 2nd Annual Assistive Technology Expo in White Plains, NY. Contact Beth Heyd, Westchester Institute for Human Development, Cedarwood Hall, Valhalla, NY 10595-1689; 914/285-7364.

October 5-9, 1994: 1994 Annual International Division for Early Childhood Conference in St. Louis, MO. Contact DEC, 412/937-5430.

October 6-7, 1994: Illinois Education & Technology Conference in Peoria, IL. Contact Kathy Bjelland, Governor's Rural Affairs Council; 217/524-6867.

October 13-14, 1994: Quincy Conference 22 in Quincy, IL. Contact Quincy Conference, 1444 Maine St., Quincy, IL 62301; 217/224-6770.

October 18-22, 1994: Closing the Gap Conference in Minneapolis, MN. Contact Closing the Gap, P.O. Box 68, Henderson, MN 56044; 612/248-3294.

November 17-21, 1994: 1994 ASHA Annual Convention in New Orleans. Contact American Speech-Language-Hearing Association, 10801 Rockville Pike, Rockville, MD 20852.

November 19-22, 1994: The Great Technology Get Together in Minneapolis, MN. Contact Dean Kephart, MECC, at 612/569-1572; or Connie Feil, TIES, at 612/638-8782.

December 8-10, 1994: 1994 TASH Conference in Atlanta, GA. Contact Robin Tincha, TASH Conference Coordinator, 206/361-8870.

Free Funding Resource

"Resources the Disabled Can Use to Acquire and Fund Computers" by Helen Hecker is available free by writing Free Computer Report, Twin Peaks Press, P.O. Box 129, Vancouver, WA 98666. Send a self-addressed, stamped business envelope.

The report includes sources for grants, services, programs, technology-related assistance, and discounted computers.

Resource Directory

The 1994 Closing the Gap **Resource Directory** is ready for delivery. The 200+page directory is full of information on hardware, software, companies, and organizations. The directory sells for $14.95 and can be ordered from Closing the Gap, P.O. Box 68, Henderson, MN 56044. A year subscription (6 issues) to the organization's magazine is $26.

Spring Sale Prices Attractive to Unicorn Users

Save from $9.95 to $29.95 on three popular products when you take advantage of IntelliTools' Unicorn Users Spring Sale! **Mousing Around™**, regularly priced at $49.95, is now on sale for $20. Available for Expanded Keyboards only, it opens the world of mouse-driven software to Unicorn Keyboard users. Using Adaptive Firmware Card® technology of mouse macros to turn complex software sequences into one-step processes, **Mousing Around** allows children to easily color pictures, design stories, and play games.

Up and Running™, available for Expanded Keyboards and Model 510, saves the time of customizing overlays and setups for different software such as **Print Shop™** and **Stickybear™** programs. An easy-to-use menu lets you choose a selection and place the corresponding overlay on your Unicorn Keyboard. The sale price is $20, a savings of $19.95.

The third sale product is **Start Talking™**, on sale for $20. The program is a fun, creative way for children with disabilities to play games, learn concepts, compose stories, and communicate. It contains 23 talking word board activities including farm animals, dinosaurs, letter writing, and 12 days of Christmas. It is available for Expanded Keyboards and Model 510. The regular price is $29.95.

All of these products require an Apple IIe or IIGS and an Adaptive Firmware Card.

Contact Intellitools (previously Unicorn Engineering), 5221 Central Ave., Suite 205, Richmond, CA 94804. Call 800/899-6687, ext. 94 to place your order. Supplies are limited.

Software Review

Time Now For Some Fripple Fun!

Thinkin' Things (Edmark) contains a Fripple Store program that both you and your children will love. Fripples are amazing little critters that come decked out in a variety of outfits, patterns, and hairstyles. Click a Fripple, and you will hear a description, "This Fripple has purple stripes, straight hair, and sunglasses." "This Fripple is purple, has blue polka dots and curly hair." Children are able to sharpen their logic skills by comparing and contrasting these crazy-looking critters! (Of course, the children have no idea that's what's happening—they're just having a great time!)

Click the telephone or fax machine and the store receives a Fripple order. The caller may say, "I want a Fripple with green stripes, sunglasses, and curly hair." The child then looks at the Fripples on the shelf, finds the one that matches what the caller wants, and clicks that Fripple. If he has made the choice that matches, the Fripple happily hops from his shelf and out the door into the waiting delivery truck. And off he goes to his new home!

The Fripples are adorable; the animation is great; and the sound effects are awesome! Children *love* this program. Teachers will find it easy to create curriculum activities involving matching and understanding of common concepts. Children with disabilities who are unable to use the mouse can still have fun with this program when their teachers make a Ke:nx setup such as the one described elsewhere on this page.

The Fripple art activity described in this issue is just one of many creative activities teachers may use to integrate this program into other parts of their preschool curriculum.

Creating a Ke:nx Setup for Fripples

by Carol Schneider

Select Hot Spots:

Place a clear transparency over the computer's monitor. Open **Thinkin' Things**. Select the "Fripple Store" program. Play around in the Fripple store for a while, familiarizing yourself with the program and its activities.

Select up to eight hot spots (those spots where you place your cursor and click to activate an object) and mark them with the overhead pen. Markings may be either X's or numbers. Once you have marked the selected hot spots, close the program and open **Ke:nx Create**. Select "new" for Alternate Keyboard.

Set Markers:

Select "Set Marker" in the Ke:nx menu or use Open Apple M. Place the marker where you want it on the screen, click, and name the marker with a number. Continue doing this until all selected "hot spots" have been given a number (1-8).

Define Keys:

Next you will need to define eight keys to correspond to the eight switches on the Multiple Switch Box. Select (by clicking on the square) the following: square 11, square J2, square K3, square L4, square M5, square N6, square 07, and square P8.

Go back to square 11 and double click. After you double click, you will see a box with these choices: User Sees, User Hears, Computer Receives. Click inside the box under "Computer Receives" and enter

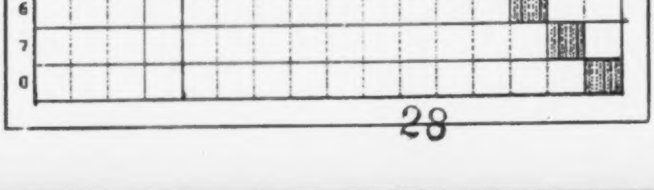
<marker>1<click><return marker 1>.

Then continue defining keys by double clicking square J2 and entering <marker>2<click><return marker 2>. in the box under "Computer Receives." Each of the squares is defined that way. Instructions for the remaining squares are given below.

For K3 enter:
<marker>3<click><return marker 3>.
For L4 enter:
<marker>4<click><return marker 4>.
For M5 enter:
<marker>5<click><return marker 5>.
For N6 enter:
<marker>6<click><return marker 6>.
For O7 enter:
<marker>7<click><return marker 7>.
For P8 enter:
<marker>8<click><return marker 8>.

Save the setup and give it a name such as "8 Fripples." Under the Ke:nx Menu load this setup. Attach a Multiple Switch Box to Ke:nx. Place eight

continued on page 11



A sample of the screen showing the grid for defining keys in squares I1, J2, K3, L4, M5, N6, O7, and P8.

***Ke:nx Setup* continued from page 10**

switches in the Multiple Switch Box. Boot **Thinkin' Things**. Select the Fripple Store program. Test the setup by randomly activating the switches.

An activity using this setup, such as **Bonding with Fripples**, described on this page, will help children understand the concept of causality. Later, the Ke:nx setup may be modified when you want to introduce higher levels of switch activation.

Frolicking Fun With the Fripples

by Lela Cunningham

During January ACTT training, Amy Betz and I were given the opportunity to evaluate different computer software programs. We really enjoyed Edmark's **Thinkin' Things** Fripple Shop. We felt that it would be a good program to use as a key experience in a thematic educational unit. According to the documentation for the program, the Fripples program encourages children to develop skills such as color recognition, visual scanning, and visual discrimination of attributes. The program is also useful in helping the children to learn to use the conceptual relationships of AND, OR, and NOT. We felt that the program could be utilized to teach a variety of other concepts as well as those described by the manufacturer. We spent time during the week to learn to make a Ke:nx set-up for a Fripple group activity (the Ke:nx set-up has been written up by Carol Schneider and is included in this edition of **ACTTive Technology**); we developed off-computer activites such as a Fripple workshop to produce Fripples (an art project), a Fripple dramatic play area which could be used for either unstructured dramatic play or structured dramatic play, a felt board group activity, a book for group activities, and various discrimination folder games.

The goal of our off-computer art project was to provide the children with a positive sharing and socializing opportunity to learn that each Fripple created is unique and different just as each child is unique and different. We felt that the use of a variety of different collage materials as well as paint and glue would offer tactile and visual stimulation for all children. The use of adaptive equipment such as paint brushes with adaptive handles would make this project a fun group activity for an inclusive environment. The materials used included: brown paper bags in a variety of sizes, shredded paper for filling the bags, yarn to tie the bags, water color markers, poster paint, foam brushes, white glue, feathers,

continued on page 12

Fripple Curriculum Activity

Bonding with Fripples

Content Area: Causality, cooperative play, turn taking, and attending

Child Objectives:
1. Press switch to activate a Fripple character on the monitor.
2. Participate in a group computer activity.
3. Takes turns pressing a switch.
4. Attend to the monitor while activating a switch.
5. Attend to the monitor while other children are activating their switches.

Materials:
Macintosh Computer with System 7.0 and Color Monitor
Thinkin' Things (Edmark)
Ke:nx® (Don Johnston Developmental Equipment, Inc.)
Multiple Switch Box
Eight (8) switches

Procedures

1. Set up the program ahead of time by loading the Fripples setup, attaching the Multiple Switch Box to Ke:nx, inserting eight switches, booting **Thinkin' Things**, and selecting the Fripple Store program.
2. Arrange the computer center so that four children can participate in this activity. If needed, demonstrate switch pressing to the children so they understand how the animation on the screen is related to the switch activation.
3. Present each child with two switches and encourage them to explore and activate one of their switches. Observe the children's behavior to determine if they understand that they are activating a Fripple by pressing their switches. Further demonstration or assistance may be needed.
4. Encourage children to take turns. While one child is activating a switch, encourage others to attend to the monitor. Talk about the Fripples as they are activated and how each child is causing a Fripple to animate.

***Fripples* continued from page 11**

yarn, styrfoam half balls for eyes, various scrap pieces of paper, material, ribbon, string, and pom poms. We provided pom poms and fat yarn for the spots and stripes for those students with visual impairments who wished to be able to feel the spots and stripes on their Fripple. We encouraged participants in our art activity to pick out the size of bag that they liked, fill it with shredded paper, tie the top, and to decorate their Fripple however they wished.

Once the Fripples were dry, they were ready to use in the dramatic play area. The backdrop for the dramatic play area was assembled from storage boxes. The boxes were cut open down a vertical side; the boxes were taped together to form an L-shaped back-drop. We painted the backdrop a color similar to that in the Fripple Shop on the computer program. A window and a door were painted on and the door was cut open. We used clear package tape to hinge the door so that the children could open it up to come into the shop. Our stage props were simple: a small child's table, a play telephone, a play cash register, and the Fripples which had been manufactured.

One session at the ACTT V Conference was a Fripples Workshop. Participants were able to experiment with the software and create their own Fripple characters from papers sacks, yarn, paint, and other art materials. The Fripple shop was on display, and participants joined in singing Fripple songs.

Free dramatic play allows children to experiment with the roles of consumer and shop owner. They can pretend to buy, sell, or order the Fripples. Structured play can be used to teach consumer economic skills, consumer manners, and phone skills.

Children in a group activity might be encouraged to pretend that they are the Fripples that they created in the art project; they can be the Fripples in the shop. Other children could take turns being the customers who call in and order a Fripple or go to the door of the shop to buy a Fripple. The "customer" would have to describe the Fripple that he/she wished to purchase and the audience would have to identify the correct Fripple. The audience member with the correct answer then takes the place in the shop of the "sold" Fripple.

Using the Fripples, Amy Betz created new song lyrics (see next page)adapted to old and familiar tunes. One song which is effective for opening the structured dramatic play activity is "How Much is That Fripple in the Window?" (adapted to the tune of "How Much is That Doggie in the Window?"). Children enjoy singing songs which are based on the characters from the computer program. Music can serve as a social integration activity in an inclusive classroom environment. When children see teachers adapting new lyrics to old and familiar songs, it encourages them to use their creative capabilities. (See the songs on page 13)

One of the related activities which we designed to go with the Fripple program was a felt board small group activity. Felt was used to cut out shapes similar to the different found objects, chenille wire, and Styrofoam balls. Children in the group can be encouraged to describe what attributes the Fripple should have. This is beneficial in encouraging children to use descriptive and expressive language. We also developed a Fripple book to be used in a group activity. We used the screen dump technique of taking a picture of the computer screen. The picture was then put in a **ClarisWorks** file where we could change it in any way we wished before we printed it. We began our book by showing examples of the different characters coming to the shop door to buy a Fripple. In a group activity, the children could be encouraged to identify the correct Fripple. Later in our book, we deleted the descriptions of the Fripples; the children in the group could now take turns describing the Fripple they wished to buy while the others tried to identify it. Additional visual discrimination or color matching activity folders could be made using the screen dump technique and resizing or coloring the Fripples.

As educators, we are only limited by our imaginations when we use computer programs as a key experience for a thematic unit. Computer programs can serve as a catalyst for creating new and different ways to reach the children that we teach.

Sing Along With Fripples

Fripple songs created by Amy Betz

How Much is That Fripple in the Window?

(to the tune of **How Much is That Doggie in the Window?**)

Refrain:
How much is that Fripple in the window?
The one with the curly hair.
How much is that Fripple in the window?
I do hope that Fripple's for sale.

I don't want a parakeet or puppy.
I don't want a big kitty cat.
I don't want a little brown hamster.
I want a big Fripple with a hat.

Repeat Refrain

Fripples may wear a pair of sunglasses.
I've seen some with spots on their knees.
I want to buy and take home a Fripple.
Oh, give me a yellow one—please.

Repeat Refrain

A Fripple can be yellow or green;
some can be purple or red.
Fripples can be plain, striped or spotted.
My Fripple will sleep in my bed.

Repeat Refrain

This Old Fripple

(to the tune of **This Old Man**)

This old Fripple - it has spots,
it wears its hair tied up in knots.
With a great big jump it hops down to the floor,
And rolls its way right out the door.

This old Fripple - it is red,
I think that I will name it Fred.
With a great big jump it hops down to the floor,
And rolls its way right out the door.

This old Fripple has big eyes,
it loves to eat blueberry pies.
With a great big jump it hops down to the floor,
And rolls its way right out the door.

I'm A Little Fripple

(to the tune **I'm A Little Teapot**)

I'm a little Fripple with great big eyes.
(form circles around eyes with fingers)
I've got stripes that go side to side.
(use thumb and forefinger to show stripes)
I get very happy when people shop,
(use fingers to indicate smile)
I leave my shelf and hop, hop, hop!
(hop in place)

Fripple, Fripple

(to the tune **Twinkle, Twinkle Little Star**)

Fripple, Fripple on the shelf,
how I want you for myself.
I love your long and curly hair,
You're better than a teddy bear.
Fripple, Fripple on the shelf,
how I want you for myself.

Note: Lela Cunningham and Amy Betz, creators of these Fripple activities and songs, are Art Curriculum Specialists on the staff of Macomb Projects' Expressive Arts for Young Children with Disabilities Technology Project. The project is funded by USDE's Technology, Educational Media, and Materials Program for Individuals with Disabilities. PR#H180D20019.

Need A Switch?

BUILD YOUR OWN!

It's easy when you follow the step-by-step instructions in

A Switch To Turn Kids On

$11.95

Order from Macomb Projects
Use order form on page 19

Ke:nx Workshops Available During ACTT Summer Training Sessions

Does this sound familiar? You have a Macintosh computer in your classroom or home and you recently purchased a Ke:nx to use with your children with special needs. You would like to know how to use this device without spending your evenings reading the manual. You wish someone would show you step by step how to create your own set-ups in one day, so you can customize activities for your children.

Well, wish no more! Instead, REGISTER for ACTT's Ke:nx Workshop!!

ACTT staff will conduct one-day Ke:nx workshops during its regularly scheduled training weeks this summer. The workshops will be held on June 9th and July 28th. These are the Thursdays of ACTT training. Come join us for the whole week of training or just attend the Thursday workshop on Ke:nx.

The week long training is free to persons interested in adopting the ACTT model and becoming ACTT replication sites. If you plan only to attend the Ke:nx workshop, there is a $100 fee. Participation will be limited to 15 people, so register today by calling Linda Robinson or Carol Schneider at 309/298-1634. Start the new school year with Ke:nx set-ups you have personally created and customized for your children!

Openings are still available in ACTT's summer training, June 6-10 and July 25-29. Find out how to participate in this training free of charge by calling Linda Robinson, 309/298-1634.

ACTTive Teachers

SHEBOYGAN SITE HAS ACTTIVE EARLY INTERVENTION PROGRAM

by Linda Robinson

On a recent visit to an ACTT site, the Early Intervention Program in Sheboygan, Wisconsin, Carol Schneider and I had the pleasure of observing several children and their families using technology. The program became interested in attending ACTT training after their director attended an ACTT workshop sponsored by WIS-TECH, Wisconsin's Assistive Technology Project, in the Fall of 1992.

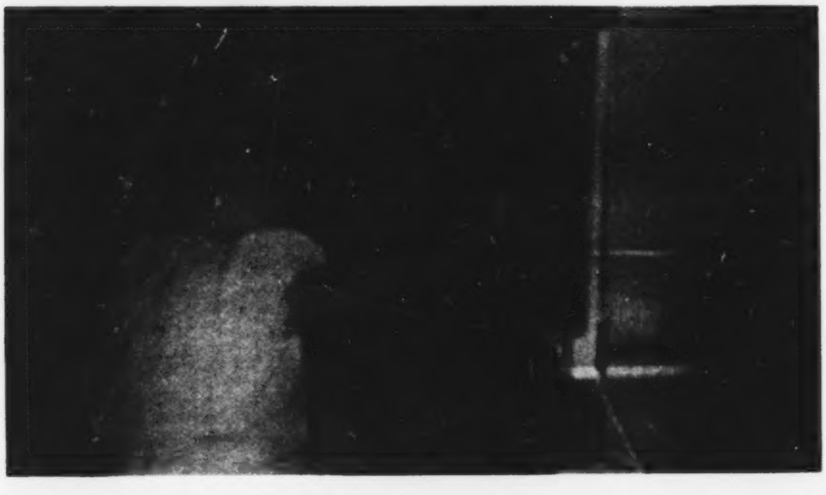
Consequently, two EIP staff, Lori Schad and Stella Kaas, spent one week in Macomb, Illinois with Project ACTT staff in January 1993, learning how to integrate technology into their birth to three services. They then returned to Wisconsin and adapted the ACTT model to meet the needs of some of their 100 children.

Lori reports that technology has helped children with skills which include problem solving, understanding causality, visual tracking, attending, and communication. The computer is used often during speech therapy as a tool to increase vocabulary, identify pictures, and select requested picture from two choices.

Although an Apple IIGS and a TouchWindow® or switch are used most often right now, a Macintosh LC III has recently been purchased, and is gaining popularity with the staff and children. The recent addition of a Ke:nx® has made staff even more excited about adapting programs to the changing needs of their children.

The program has a good family involvement component. Since parents bring their children into the center for intervention and therapy sessions, they have learned first-hand how technology can be a benefit. Parents are often amazed that children in this age group can use computers. Some parents videotape computer sessions themselves to show friends and relatives at home. One parent was so pleased her daughter was using technology that she expressed her appreciation in a letter to us during our recent visit. "We feel exhilarated at having our daughter have this opportunity...her first of many steps upward! (At least in the computer world!)"

The Early Intervention Program has made tremendous strides during the past year in acquiring new equipment, training staff members and integrating technology into their program. Their next goal is to become more proficient at designing overlays for the Unicorn™ Expanded Keyboard through the use of Ke:nx. Their first effort is reported to be an overlay which contains pictures from one child's family. Staff members are anxious to see whether this activity will elicit a happy response from a child who rarely interacts with others. ACTT staff are betting that it will be an instant winner!



The TouchWindow makes activating a program easy for young children as they respond to their natural inclination to touch what they see on the monitor screen. This two-year old girl at Sheboygan's Early Intervention Program enjoys animating an object by touching the TouchWindow.

ClarisWorks Tips and Shortcuts

Editors Note: The following information is from a Project TIP training module designed by Letha Clark, Assistive Technology Trainer with Project TIP. The Technology Inservice Project is funded by the Early Education Program for Children with Disabilities. PR#HO24P10077.

Cut, Copy and Paste

1.Select a line or paragraph of text.

2.Choose Cut or Copy from the Edit menu. Cut removes the selected paragraph or text from its location in your document and copies it to the clipboard, which is a temporary storage place in the computer's memory. Copy leaves the text where it is and a copy is also placed on the clipboard.

3.Select the spot in your document where you want the copy to go. Move the I-beam pointer to the desired location in the text and click. The insertion point blinks where you clicked in the text.

4.Choose Paste from the Edit menu.

Move Text

1.Select the text you want to move.

2.Choose Cut from the Edit menu.

3.Click the location in the document (set the insertion point) where you want to insert the text.

4.Choose Paste from the Edit menu.

Move Graphics

1.Click on the graphic. Your I-beam will change to the pointer.

2.Press and hold the mouse button down. Reposition the graphic to its new location.

Resize Graphics

1.Click on the graphic.

2.Place the pointer in a handle in one corner of the graphic.

3.Press and hold the mouse button down. Drag the mouse right or left to change the width, up or down to adjust the height and diagonally to equally adjust the height and width.

Copy Text

1.Select the text you want to copy.

2.Choose Copy from the Edit menu.

3.Click the location in the document where you want to insert the text.

4.Choose Paste from the Edit menu.

Undo

This command "undoes" the last thing you did. If you accidentally delete, cut, or change the wrong word or line of text you can cancel the action. After the mistaken action and BEFORE you do anything else - choose Undo from the Edit menu. The original text is restored. The keyboard command is "⌘ and Z." This may be one of the most important things to know and can certainly reduce your level of anxiety.

Check Spelling

1.Choose Check Document from the Spelling submenu of the Edit menu. Check Document checks the whole document. A Spelling dialog box will appear on the screen.

2.Replace the word by typing the correct word in the Word box OR select the correct word from the list of replacement possibilities. If the word is spelled correctly (the dictionary may not recognize the word), click Skip to accept the word as it is.

3.When the end of the document is reached and the check is complete, click Done to return to the document.

Find Synonyms

1.Select (highlight) the word you want to change.

2.Choose Thesaurus from the Spelling submenu of the Edit menu.

3.When you find a word you like, click the word, then click Replace.

4.If you don't see a word you like, select a word from the list and click Look-up to see more words.

Correct mistakes

1.To correct a mistake as you type, press the Delete key removing as many characters as necessary to make the correction.

2.Retype correct characters.

OR

1.To correct a mistake after you have moved on, position the I-beam pointer next to the text you want to select and drag through it, highlighting the text to be changed.

2.The incorrect text is replaced with the correct text as you type the changes.

Select Text

1. To select a word, double-click on the word.

2. To select an entire line, click three times anywhere in the line.

3. To select a complete paragraph, click four times anywhere in the paragraph.

4. To select an entire document, choose Select All from the Edit menu.

5. To select a block of text, click to place the insertion point in front of or behind the desired text, hold down the Shift key, and click at the opposite end of the text you want to select. Move the text up or down by using the up and down arrows in the scroll bar on the right side of the screen.

Just Say No!!

Did you think you wanted to print then changed your mind. Cancel your print command by pressing and holding down the command/open apple key (⌘) and tapping the period (.) key.

Did you double click on an application icon (you double-clicked on KidPix and really wanted ClarisWorks) by mistake. Immediately press and hold down the command key (⌘) and the period (.) keys at the same time and you may be able to cancel the command to launch the program.

Group Objects

Select objects you want to group to-

continued on page 16

ClarisWorks continued from page 15

gether as a single object. First choose the "pointer" from the graphics menu bar on the left side of the screen. Click on one object, then depress the shift key, hold it down, and click on the other objects you want to include in the group. If all objects are displayed on a page (and your document is only one page), use the Select All command and select all the objects. Open Arrange from the menu bar and arrow down to Group (Command "G"). All objects are now grouped as one and can be moved and placed in your document much easier.

Other Tips

Put it ALL away!!

You are all done and want to put all the windows away with one quick click. Hold down the "Option" key and click in the "put away" box of the active window (the one with lines on either side of the document title). With one click you cleaned up your desktop and are now ready to "Shutdown." Open the Special menu from the menu bar and arrow down to "Shutdown".

Getting out of KID DESK

If you have designated KidDesk as the start-up, the start-up screen you see is not the desktop but KidDesk. If you need to find the desktop, complete the following steps:

1.Press and hold down the Option and ⌘ keys and tap the "A" (for Adult section).

2.Open the File menu from the menu bar and arrow down to Quit to Finder.

Wait a few seconds. This is going to look like the "right place" because it is!!

Copy graphics from Print Shop to the Scrapbook

To get those graphics from PrintShop for the Macintosh to the Scrapbook where you can use them in other documents follow these steps:

1.Open PrintShop.

2.Choose the greeting card or sign option.

3.Open the Graphics menu from the menu bar.

4.Choose "Select Graphics".

5.Pick either Large or Small graphics.

6.Select graphics by clicking on the ones you want.

7.Click "OK".

8.Open the Graphics menu from the menu bar and select "Graphic Editor".

9.Click on the desired graphic. It will appear in the box at the upper left of your screen under the words Graphic Editor.

10.Click on "Copy" (it will show up on the clipboard in the lower right of the screen), then click "OK".

11.You will return to the "Untitled" greeting card or sign screen. Open the Apple () Menu and select Scrapbook.

12.Open the Edit menu from the menu bar and choose "Paste" (Command "V"). The graphic will be displayed in the Scrapbook.

13.Repeat steps 6 - 12 for each graphic to be added to the Scrapbook.

Command shortcuts

Reference to the Command key can be confusing until you realize that that's the key with the in one corner and the (⌘) in the other.

Save	Command "S"
Print	Command "P"
Copy	Command "C"
Paste	Command "V"
Select All	Command "A"
Bold face	Command "B"
Italicize	Command "I"
Underline	Command "U"
Undo	Command "Z"
New	Command "N"

Frequently used symbols

To get this symbol:	Use this key combination:
°	Option/Shift/"8"
(Hold down option and shift and tap 8)	
™	Option/"2"
®	Option/"R"
•	Option/"8"
¢	Option/"4"
÷	Option/"?"
	Option/"K"
©	Option/"G"
∆	Option/"J"
√	Option/"V"

Switches From Innocomp

Innocomp™, Innovative Computer Applications, sells switches that meet a variety of needs. The Round Pad Switch, operated by pressing the top surface, has an active area of 3.25" and requires a force of 200 grams to operate. The switch provides both auditory and tactile feedback.It costs $70.

The Micro Light Switch is very small (active area is only .5 x .75") and extremely pressure sensitive (10 gram operating force). It can be mounted using a standard '4-40' screw. The cost is $55.

The Soft Red Switch is covered with a red velvet bag, which can be removed and washed. Velcro tape can be sewn to the fabric to make mounting convenient. An operating force of 800 grams is needed. This round switch has an active area of 3.5" in diameter. It costs $75.

The Cup Switch is a tiny switch (active area is only 1.8" diameter) cupped in a plastic case providing a surface for easy mounting. Supplied with five colored adhesive dots, the switch is operated by pressure (250 grams) on the top surface. The switch costs $50.

The Plate Switch is a small (2"), low profile single membrane switch. Operating force is 50 grams. The switch may be ordered in four colors: red, green, blue, or yellow. It sells for $60.

For more information, contact Innocomp at Suite 302, 26210 Emery Road, Warrensville Heights, OH 44128; 216/464-3636, 800/382-8622.

NICHCY Resource Uses Understandable Terms, Explains Law Regarding Assistive Technology

The following information is quoted from the September 1993 NICHCY Digest, volume 3, number 2, and is reprinted with permission. To order the entire document, refer to ordering information on page 8 of this issue.

Your child's need for ***assistive technology devices or services***, or both, may be included in the IEP. ***Assistive technology devices*** are defined as any item, piece of equipment, or product system that is used to increase, maintain, or improve the functional capabilities of individuals with disabilities (§300.5). Assistive technology devices can be acquired commercially off the shelf, modified, or customized. Since the explosion of technology in our country, assistive technology devices have become more widely available and have been shown to dramatically improve the functional capabilities of individuals with disabilities in terms of mobility, communication, employment, and learning. Many of the devices have been instrumental in allowing students with disabilities to be educated in regular classrooms, working and learning alongside of their nondisabled peers. Some examples of these devices are: electronic communication aids, devices that enlarge printed words on a computer screen, devices that facilitate communication for individuals with hearing impairments, prosthetic devices, braille writers, and keyboards adapted for fist or foot use.

Assistive technology services are any services that directly assist an individual with a disability to select, acquire, or use an assistive technology device. This includes evaluating the needs of the child, including a functional evaluation in the child's customary environment. The term also includes such services as:

- purchasing, leasing, or otherwise providing for the acquisition of assistive technology devices;
- selecting, designing, fitting, customizing, adapting, applying, retaining, repairing, or replacing assistive technology devices;
- coordinating and using other therapies, interventions, or services with assistive technology devices (such as those associated with existing educational and rehabilitation plans and programs);
- providing training and technical assistance to the individual with disabilities and his or her family, if appropriate;
- providing training and technical assistance to professionals, employers, or others who provide services to, employ, or are substantially involved in the major life functions of children with disabilities. (§300.6)

Regulations for the IDEA state that schools must make assistive technology devices and/or services available to a child with a disability, if required as part of that child's special education, related services, or supplementary aids and services (§300.308). A recent letter of policy for the Office of Special Education Programs (OSEP) states that "consideration of a child's need for assistive technology must occur on a case-by-case basis in connection with the development of a child's Individualized Education Program (IEP)" (Goodman, 16 *Education of the Handicapped Law Report* 1317, OSEP 1990). Thus, when the IEP of a student is being developed, reviewed, or revised, the school district must assess, if appropriate, the student's need for an assistive technology device or service, determine those devices or services that will facilitate the student's special education (particularly those that will facilitate his or her education in the regular educational environment), list them in the IEP, and then provide them to the student.

RJ Cooper Announces Release of CrossScanner

RJ Cooper & Associates have announced **CrossScanner**, the "easy way to run any software by single switch."

According to the company, **CrossScanner** is simple to install and has modules for almost all aspects of computer integration, such as mouse moves and clicks, double clicks, drags; text entry and menu bar option.

The software sells for $199 and is available for both Macintosh and Windows. Hardware is required ($50 for PC and $80 for Mac).

More information is available at 800/RJCooper; 714/240-4853 (voice); 714/240-9785 (fax).

Ke:nx Setups Available for Millie's Math House

Do you have young children who would enjoy Edmark's **Millie's Math House** but need switch or alternate keyboard input? Project ACTT's setups to use with **Millie's Math House** may be the solution to your problem. The disk contains 22 setups to be used with scanning and 10 setups for alternate keyboard use. The disk, a reduced version of the graphics for Unicorn setups, and a copy of ACTT's Levels of Switch Progression are available through Macomb Projects for $15. Use the order form on page x of this issue of **ACTTive Technology** or fax a purchase order to 309/298-2305.

Ugly Duckling Software Promotes Diversity, Anti-Bias

by Letha Clark

ACTTive Technology provides this column as a regular feature for helping teachers use technology to expand their anti-bias curriculum.

The creative minds that develop software have been busy putting a new twist on an old favorite. **The Ugly Duckling**, a recent software release in CD-ROM format, retells the timeless Hans Christian Andersen tale.

There is something different about the biggest hatchling in the nest. He's UGLY. He's a giant and he's UGLY. He's the wrong color and he's UGLY. He's funny looking and he's UGLY. In spite of all that seems to be wrong, he does have one redeeming attribute.He can swim. Even that ability is tempered by the lucky fact that he's not a turkey! He's kicked around and shoved about and finally pushed out of the barnyard society. Winter is hard and times are tough but spring comes and time works a miracle of beauty. That ugly, giant, funny looking duckling is not a duck but a beautiful swan. Use this software in a classroom to celebrate again the difference and "specialness" of each child and emphasize that each child's differences are that child's strengths.

Produced by Morgan Interactive, Inc., **The Ugly Duckling** is a CD-ROM that recognizes both Macintosh and IBM platforms (now that's diversity in action!!) and has a street price in the neighborhood of $50. Packaged with the software is a small stuffed and not-so-ugly gray duckling.

Resources

For more information and resources to help you help children understand the value of diversity, subscribe to *Teaching Tolerance*, a magazine mailed twice a year at no charge to educators. It is published by the Southern Poverty Law Center and was designed "to provide teachers with resources and ideas to help promote harmony in the classroom." Write to Editor, Teaching Tolerance, 400 Washington Avenue, Montgomery, AL 36104.

The National Early Childhood Technical Assistance System (NEC*TAS) has resources related to diversity. Among them are *Cultural competence in screening and assessment: Implications for services to young children with special needs ages birth through five*, a 30-age paper by Anderson and Goldberg; *Planning for a culturally sensitive program* (24 pages) by Cooper; and *Serving preschool handicapped children of various cultures: An annotated bibliography* (28 pages) by Hicks. Phone 919/962-2001.

Edmark's Sammy Does For Science What Millie Does For Math and Bailey for Reading

Edmark announces two new Macintosh software programs for grades Pre K and up. **Sammy's Science House** is based on the same successful teaching methodology as Edmark's award-winning **Millie's Math House** and **Bailey's Book House**. Sammy and his friends provide youngsters, preschool through grade 2, hours of fun as they explore fundamental scientific processes. Students practice observing, sorting, comparing and sequencing as they solve problems and learn to see things in new ways.

The program requires a Macintosh Plus or later; hard disk; System 6.0.7 or higher (requires 1MB RAM for monochrome and 2 MB RAM for color); for System 7.0 or higher (requires 2 MB RAM for monochrome and 4 MB RAM for color). The price is $59.95. The program also comes in an MS-DOS version.

Words Around Me can be used with students from preschool and up. This exciting program uses on-screen pictures, animated graphics, and human voices to teach vocabulary important to students' daily lives. Students learn new words and understand meanings as they associate written and spoken words with visual images.

Special options allow you to record progress and customize the pace and level of difficulty for individual needs. Edmark call it a program that is "ideal for ESL students and students with special needs."

The **Words Around Me Complete Package** includes the **Words Around Me** program; My Collection I, a data disk of 40 vocabulary words and pictures for basic foods, utensils, clothing, and body parts; Home; Neighborhood; School; Community; and Key Concepts Word Collections (about 250 words) for $399.95. Some of the word collections are available in Spanish.

You can buy a starter **Words Around Me Basic Package** for $199.95. It includes the **Words Around Me** program and My Collection I. The other programs (Home, Neighborhood, etc.) can be purchased separately for $49.95 each.

Words Around Me requires a color Macintosh (256 colors recommended); hard disk; System 6.0.7 or higher. For System 6.0.x, 2 MB RAM; for System 7, 4 MB RAM.

Sammy's Science House and **Words Around Me** provide built-in scanning for single switch users and are TouchWindow compatible. Both programs are scheduled for release in July. For more information, contact Edmark, P.O. Box 3218, Redmond, WA 98073-3218; phone orders 800/362-2890.

Simple Switch Software Records Child Progress

Macomb Projects has software available for Apple II computers and Macintosh computers which use a IIe emulator card. Use the order form below to order these and other products. A catalog is available upon request.

Switch 'N' See

This program helps reinforce understanding of cause and effect in a cognitively young child. When a switch is pressed, a rag doll appears on the monitor and dances to "Skip to My Lou." The doll dances as long as the switch is activated.

The program has record-keeping capabilities. Number of seconds between switch presses, number of switch presses, and number of notes played are recorded. Records may be printed. The program costs $11.95.

Master Blaster

This game for two players reinforces visual attending with a switch response. A "beep" may be added as an auditory cue for the child.

A rocket ship appears on the screen and the child who presses his/her switch first launches the rocket. **Master Blaster** keeps track of who pressed the switch first and how many times each child launched the rocket. After each launch, the children are told who launched the rocket.

If a child tries to get an "edge" on his opponent by holding his switch down before the rocket appears on the screen, the program says, "(Child's name), release the switch." This is repeated until the press is released.

Master Blaster ($11.95) is used with the Echo Speech Synthesizer.

Simple Switch Activities

The program ($11.95) includes four activities which can be used to train switch use for cause-effect relationships. The record-keeping information includes number of presses, duration of press, and elapsed time between presses. Time is recorded in seconds to give you accurate documentation for measuring skill acquisition.

MACOMB PROJECTS' COMPUTER PRODUCTS ORDER FORM

Name/Agency ______________________ **Billing Agency** ______________________

Shipping Address ______________________ **Billing Address** ______________________

City ______________________ **State/Zip** ______________________

Phone (____) ______________________ **Date of Order** ______________________

Products	Price	Quantity	Total

MAKE CHECKS PAYABLE TO MACOMB PROJECTS

SHIPPING ______

TOTAL ______

Your check or purchase order must accompany the order. Purchase Orders may be faxed to 309/298-2305. No phone orders accepted. Materials are shipped parcel post unless other arrangements are made. Please allow four to six weeks for delivery. Prices are subject to change without notice.

Orders from outside the U.S. must be paid in U.S. funds drawn from U.S. banks. Allow additional time for shipment.

ACTTive Technology Subscription Form

Name ____

Agency ____

Street Address _____________________________________

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For a year's subscription to *ACTTive Technology*, complete this form and return it with a purchase order or check for $16.00 to Macomb Projects, 27 Horrabin Hall, Western Illinois University, Macomb, IL 61455.
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ACTTive Technology

Project ACTT, Western Illinois University, Macomb, IL 61455

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VOLUME 9, NUMBER 3 Summer 1994

Study Shows Assistive Technology Produces Positive Effects, Makes Recommendations for Future Efforts

by Patricia Hutinger

The Winter 1994 issue of ACTTive Technology reported on a two-year study[1] *which described and explained how assistive technologies*[2] *were used in educational programs for children who have significant multiple disabilities which hinder their interactions with people, objects, and events in their environment. Changes seen in the study's 14 children, who participated in a variety of assistive technology experiences as they moved through school, as well as the effects of technology applications and barriers to the achievement of the children's educational goals were examined using a modified longitudinal approach. Based on the study's findings, recommendations for improving the potential benefits of assistive technology for children with disabilities are discussed in the following article.*

Benefits of Assistive Technology Use

One of the most powerful and encouraging findings of the entire study was that children with severe disabilities do evidence positive social and emotional changes over time when they use the tools of assistive technology. This finding confirms the claims of many professionals and families who have been reporting for some time that when children use switches, electronic toys, computers, the accompanying peripherals, software, and electronic communication devices, the effects are positive.

Benefits related to improvement in cognition and communication were also found. Across the case studies, the children were able to do things at the end of the study that they had been unable to do when they began using technology applications, although changes in behavior came very slowly for some. Slow changes were expected since the children who participated in this study were selected because they were significantly disabled and needed technology tools to function in their everyday settings. The results support the contention that assistive technology provides the tools to do some things independently for children who are not able to access the people, objects, and events of their world.

Although rural, midwestern communities provided the settings for the study, the strength of the findings across cases would suggest that other children with significant disabilities and their families across the country might make similar gains and face similar barriers. Technology is not a frill for these children, rather it represents useful tools and ways to learn. Staff and families agreed that children made progress. Observations over time revealed positive changes even though services were often inconsistent as children moved through school.

Inside this Issue:

Information about the March 16 - 17 ACTT VI Conference on page 3

Directions for an Inexpensive Communication Device on page 6

A New Curriculum Activity for the Macintosh on page 7

Recommendations Resulting From the Study

A paradigm shift among staff and administrators is needed if the schools are to make use of the potential of technology for children with disabilities. Rather than using the available technologies for traditional purposes, new avenues must be explored.

New concepts of appropriate adaptations and activities for children with disabilities are needed as well as resources to support the staff who plan those activities. Before this occurs, it is likely that carrying out massive awareness and training efforts which will reach both the organizational level and the classroom level is essential. These activities can be carried out by parent and professional organizations, institutions of higher education, public schools, and agencies if they have an underlying foundation in technology applications. Unfortunately, at the present time, some organizations have yet to recognize the importance of technology. Family organizations nationwide seem to underscore the importance of technology applications to a greater extent, and with greater understanding, than some professional educational organizations. Administrative emphasis on and support of effective ongoing staff development as well as providing adequate funding for equipment and materials are necessary if children are to benefit.

continued on page 3

From The Editors. . .

by Linda Robinson

Anyone who has used technology with a young child has, more than likely, comtemplated the effects that technology will have on this individual over time. When children are successfully using the computer to help with individualized goals, we may not think about the factors which contribute to the success. However, when a child is unable to progress with the use of technology, we may blame the equipment itself or many other factors. These factors, both positive and negative, have been a focus of research for Macomb Projects during the past two years. We included findings from the research in the our Spring edition. Our resulting recommendations are included in this issue.

One interesting research finding was that even if teachers had newer software or computers, they were oftentimes using technology in traditional ways, as electronic workbooks or for drill and practice on a particular skill. Ten years ago many educators were taught to use technology in these ways. However there are so many exciting applications with computers today that families and educators need to become aware of the recent possibilities. This awareness can only come from ongoing training support. Without periodic training, the same software and activities are used day after day, and children's enthusiasm for using computers diminishes. One of our recommendations is that educators explore new avenues with technology. This takes team effort and administrative support for training;, however, in the long run it helps children be more successful.

When we look at the possibilities that computers hold today, it truly is a shame that we do not take full advantage of the technology in creating activities for children and making our own jobs easier. One of the Macintosh's capabilities that we find especially appealing in early childhood is the ability to save and print screens from computer programs. This is a wonderful tool for creating off-computer materials, such as those described in the curriculum activity. However, we must caution you if you are creating materials with computer graphics. Computer screens from software are copyrighted materials. They can be used only within the context for which they were intended. Copyright laws cover the fair use of computer graphics. Unauthorized copy and use of computer graphics puts you at risk of copyright violations. For further information on copyright issues, contact Software Publishers Association at 202-452-1600. Our advice is to contact the publisher of the program if you are unsure of the legality of your graphics use. Most companies will grant permission when they know it is for classroom or individual child use only. This is also a good way to let developers know how their program is being used. Our staff are constantly creating new activities and materials using the screen dump capability; however, we always make sure we have the publisher's permission ahead of time.

As we look ahead to the Fall, we are excited about several things in our office - three newly funded projects which will each meet a definite need in the early childhood technology field, and the planning of ACTT VI. Our keynote speaker, Patrick Meckley, has extensive experience in switch construction and low and high tech adaptations. Since switch making is always a popular topic at the conference, he will be a valuable addition for past attendees as well as newcomers. Don't forget to mark your calendar now, and look for more conference details in the next issue.

Table of Contents

Recommendations for Future Assistive Technology Efforts 1
From the Editors 2
ACTT VI Speaker 3
Prentke Romich Products 5
New Study Concerns Technology and Emergent Literacy 5
Technical Support Numbers 5
Simple Communication Device 6
CD-ROM Preview Software 6
Curriculum ACTTivity 7
Calendar of Conferences 9
Easy Street Review 9
Big Bug Alphabet Book Review 10
NAEYC Technology Videos 10
Milliken Software 10
Technology Assessment Software . 11
Software Purchasing Program 11
Safari Software 11
Putt-Putt Software 12
Surplus Software 12
TTAP Project Funded 12
Mac is Not A Typewriter 13
New Laureate Software 13
EA*Kids Art Center Review 14
Terrapin Software 14
Marblesoft Software 14
Observational Technology 14
Stationery Pad Option 15
Product Order Form 15
ACTTive Technology Subscription Form 16

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Recommendations continued from page 1

Technology applications must be integrated into children's daily lives rather than being treated as a means of developing isolated academic skills. Teaching plans, strategies and technology management must be changed in order to provide full use of various applications. Changes such as these are unlikely unless massive staff development activities and changes in preservice education are undertaken. Software that helps teachers, families, and children to integrate technology is scarce. Too much software targets drill and practice, encouraging the development of isolated skills.

Since the technologies described in this study were powerful enough to produce positive effects in social, emotional, cognitive, and communicative development for children with severe and multiple disabilities, other children with similar needs should have consistent access to computers, alternative input and output devices, and appropriate software in their educational programs. Even small gains are important and improve the quality of life for children and their families.

Technology plans for children, developed by a team of professionals and the families, updated at regular intervals, must be in place for each child with disabilities and written into the IEPs. Initial plans should evolve from a team-based technology assessment. Resources to implement the assessment recommendations must be available. When children move from place to place, a policy procedure must be in place so that equipment either moves with them or that similar equipment is available in the receiving setting. Further, receiving staff should be competent in technology use and have access to ongoing staff development activities.

Computers and other assistive technology equipment need to be in the classroom with the child, not in a resource room down the hall. In addition to individual activities, group activities need to be planned so all the children in the classroom use the equipment. The targeted child will probably benefit even more when s/he is included in group activities.

A concerted effort to provide a system and procedures to support collaborative efforts among staff and families is essential, not only during early childhood but as children progress through school. Planning, although important, is not enough. Action is needed. Discrepancies between the families' purposes for technology use and the school staff's purposes should be minimal. Families should have opportunities to provide input into their children's use of technology whether or not they are able to provide similar technology at home.

A staff and family team approach is needed. A team approach to assessment and planning as well as implementing adaptations and activities is necessary because no one person can be expected to know how to assess factors such as positioning, placement, and adaptations and then suggest and carry out strategies for implementation. Family input into the entire process is necessary if applications are to succeed over time.

continued on page 4

ACTT VI Speaker Emphasizes Affordable Assistive Technology

Circle March 16 and 17, 1995 on your calendar and plan to attend the Sixth Annual Assistive Technology Conference sponsored by Project ACTT. ACTT VI will provide you with two days of valuable workshops and a variety of choices so appealing that we commonly hear, "I don't know which to choose. I want to go to them all!"

The ACTT VI featured speaker and presenter is Patrick Meckley, the director of the Assistive Technology Program at the Wm. W. Fox Developmental Center in Dwight, Illinois. Patrick is often referred to as "Illinois' Mr. Switchman" and has given workshops and presentations across the country.

The parent of a child with disabilities and a long time computer and electronics hobbyist, Patrick has had many years experience making affordable assistive technology a reality. (See one of Patrick's ideas on page 6.) He will give a keynote presentation at ACTT VI on Thursday morning and will provide a hands-on switch-making workshop each afternoon of the conference.

A variety of switch kits will be available for conference participants to purchase and make under Patrick's direction.

As in the past, the majority of the ACTT conference sessions will be given by the Macomb Projects' assistive technology staff. Topics will include technology assessment, expressive arts and technology, public domain software, software to promote literacy, understanding and using Ke:nx, integrating computers into the early childhood curriculum, and more. As before, a preview lab will be open each session so participants can preview Macomb Projects' vast library of commercial and public domain software.

Plan to join us in March for two informative days! Registration information is available from Project ACTT, Joyce Johanson, ACTT VI Coordinator, 27 Horrabin Hall, Western Illinois University, Macomb, IL 61455; 309/298-1634; fax 309/298-2305.

Recommendations **continued from page 3**

Families need assistance in acquiring information about purchasing computers, communication devices, their accompanying peripherals and software, and training. Assistance might come from the school district, the special education cooperative, or a public service agency. However, the pathways for securing such assistance should be clear and available to all.

> *School districts and agencies need to be aware that technology changes, that equipment must be updated, and that budgets need to allow for new equipment purchases on a regular basis.*

Inclusion plans made by school systems need to recognize the importance of the assistive technology tools used by children with multiple and severe disabilities and include the equipment, software, and staff training. Schools need to go beyond planning, insuring that procedures to serve these children are in place. While children with mild to moderate disabilities can use technology applications to enhance their lives, children with severe disabilities *must* use them to speak, to write, and to accomplish other tasks. Staff responsibilities to assist in providing services must be accompanied by resources to provide needed technology training on an ongoing basis.

Policies at the district and state level that provide opportunities for systematic staff and family development in technology applications, ranging from simple applications such as adapting toys for switch use to more complex content such as designing adaptations for word processing are needed. Ongoing technology training at the preservice and inservice level is needed for the entire team of professionals who work, or intend to work, with children with disabilities. This training should include case study approaches similar to the case approach used in business and law schools to provide learners with concrete examples, issues, and problems. Faculty and training teams must be trained to use the approach. Videotapes of children, families and staff using equipment and discussing the applications in use, and benefits and barriers should be part of this training. Hands-on activities should be a major part of training events.

Administrators need to endorse and allow training time directly related to technology during school time or staff should be compensated for spending out of school time. If administrative support is not evident, non-technology teachers are likely to attend other training because of their fear of technology, their attitude that technology is not needed for the children they teach, or their concern that they cannot take time to learn one more thing.

A system for staff and family support in using applications and trouble shooting should be part of the school system. Support resources might include ongoing formal and informal training, written materials and articles which are easily available, networking groups or "user" groups for families and staff locally, and access to a telecommunication link to national resources. A technology specialist and trouble-shooter on staff would be helpful, especially if they were knowledgeable about the needs of children with disabilities.

School districts and agencies that serve children with disabilities must have a system for maintaining and repairing equipment in a timely fashion. Collaborative strategies that call for combining resources among several districts to obtain repairs is one way to accomplish this. Repair services call for knowledgeable equipment service persons and available parts. Sharing these resources with families for home equipment repair while at the same time determining reasonable costs for repair services would alleviate some of the families' concerns.

School districts and agencies need to be aware that technology changes, that equipment must be updated, and that budgets need to allow for new equipment purchases on a regular basis. Newer equipment is faster and more powerful and is likely to alleviate the time constraints referred to by teachers in this study.

A policy should be in place *and in use* for updating equipment and software. This may mean setting up a lending library. If agencies collaborate, the resource could be used by families as well as staff. Perhaps joining forces with the state library system would enhance this effort. Families should be permitted to take equipment used by children home during the summer and at other times.

Designers of equipment need to consider their products carefully to determine whether or not the devices can be used easily by child audiences, although the market may be small. A survey of parents of young children with disabilities who use technology is needed, not a survey of adult consumers. Needs differ.

Software designers need to develop interactive software targeted on problem solving and integrating technology into daily life rather than depending on drill and practice software related to academic skills. Software should be designed so that it can be used by children with and without disabilities alike.

Companies that provide health insurance for families of children with dis-

continued on page 6

Prentke Romich Introduces New Products

Prentke Romich Co. announces the availability of two new products, **AlphaTalker** and the **Unicorn Keyboard Adapter**.

AlphaTalker, a speech-output communication device for people with limited communication needs, allows vocabulary to be saved to a computer disk and also performs limited computer emulations. It can store 3 minutes of high-quality digitized speech or more than 5 minutes of extended quality speech in memory. **AlphaTalker** can be accessed by pressing a keyboard using an optical pointer or by switch-activated scanning.

The Unicorn Keyboard Adapter allows people who use the model I or II Unicorn Expanded Keyboards to operate a Liberator communication device

For more information about either product, contact Prentke Romich Co., 800/262-1984.

Macomb Projects 1994-95 Catalog contains new resource products for the Mac from the Technology Inservice Project (TIP).Call 309/298-1634 to request your copy or write to 27 Horrabin Hall, WIU, Macomb, IL 61455.

New Research Project to Study Effects of Interactive Technology Curriculum on Children's Emergent Literacy

Macomb Projects, under the direction of Dr. Patricia L. Hutinger, Early Childhood Professor at Western Illinois University, has received $200,000 funding from the U.S. Department of Education's Technology, Educational Media, and Materials Program for Individuals with Disabilities for the first year of a new research project, The Early Childhood Emergent Literacy Technology Project.[1] The Project began August 1.

The Early Childhoood Emergent Literacy Technology Project is a three year study which will describe and explain the effects of an interactive technology literacy curriculum on the emergent literacy knowledge and abilities of 3, 4, and 5 year old children who demonstrate mild to moderate disabilities. Based on rigorous naturalistic inquiry, the study will incorporate a case study approach, studying in depth over the three project years four different types of classrooms categorized on their technology use for comparison purposes. For the purposes of this study, "technology" is defined as the use of computers, printers, TouchWindows and other peripherals, tape recorders, and video cameras.

The four classroom categories range from those not using technology at all to those having a great deal of experience using technology. The Project's interactive technology literacy curriculum will be presented differentially to the classrooms during the various phases of the Project.

The interactive technology literacy curriculum is based on an emergent literacy approach and includes software selected via an analysis of the quality and interactivity levels of the software, its appropriateness, and its appeal to children. The four sections of the curriculum are 1) interactive commercial software, 2) software classrooms produce themselves using HyperStudio for the Macintosh, 3) software produced by other early childhood classrooms using HyperStudio for the Macintosh, and 4) tool function software such as graphics and story-making software. Each section of the curriculum contains on-computer and off-computer activities which contain important elements of emerging literacy.

Three early childhood classrooms in Good Hope, Industry, and Jacksonville, IL, will participate in the first phase of the study. Other classes from Jacksonville will be added as the study progresses. The interactive technology curriculum is expected to have positive benefits on the emergent literacy development of the children in those classrooms.

The research will be directed by Dr. Hutinger. Carol Bell will coordinate the Project.

Technical Support and Sales Numbers

Company	Technical Support	Sales
Apple	800/767-2775	800/795-1000
Brøderbund	415/382-4700	800/521-6263
Claris	408/727-9054	800/544-8554
Davidson	800/556-6141	800/545-7677
Edmark	800/426-0856	800/426-0856
MECC	612/569-1678	800/685-6322
Microsoft Word	206/635-7200	800/426-9400

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[1] PR #H180G40078. Federal share for the total project costs equals 100%.

SIMPLE COMMUNICATION DEVICE IS EFFECTIVE AND INEXPENSIVE

The following article first appeared in the "Ten Dollar Tech" column, a feature in the April 1994 issue of ***TECHTALK****, the bimonthly publication of the Illinois Assistive Technology Project (IATP). It is reprinted here with permission from IATP. The idea for this low-cost communication device came from Patrick Meckley, Director of the Assistive Technology Center in Dwight, IL.* ***TECHTALK*** *refers to Pat as "Illinois' Mr. Switchman!" If you like this idea and are interested in a list of conferences where Pat will be presenting, contact him at 815/584-3347.*

Chipcorder Technology, a registered trademark of Information Storage Devices and Hallmark Cards, has made digital recorded communication affordable to everyone. The recordable greeting card advertised on television can be easily modified to operate by an external switch, giving people without speech a simple, but affordable, communication device.

The card is available in any Hallmark store for $7.95 plus tax. The only other part necessary is one 1/8" open-frame jack from Radio Shack (catalog #274-251) at 3/$1.98.

To modify the card, first remove the recording device from the back panel of the card. Turn it over and remove the cardboard cover from the switch area. From the front side, carefully drill a 1/4" hole 2 1/2" down and 3/8" from the top left corner. Install the jack and solder the green and black wires from the switch to the jack.

Plug in any external switch and follow the instructions included with the card for recording your message. Activate your switch for playback.

Address Change:

Dunamis, Inc.
3580 Hwy. 317
Suwanee, GA 30174

This device gives you up to ten seconds of digital recorded communication with almost unbelievable clarity and volume for the price.

For a copy of the schematic, call IATP. 217/522-7985.

Variations:

Once you have tried this modification, you'll want to try others. It can be easily disassembled and put into a more convenient closure. You will also want to try multi-messages. You can use one device and switch for say, a "Yes" response...and a second for a "No." But with 10 seconds of recording time, you can make entire sentences out of the responses.

Note: On March 16-17, 1995, Mr. Meckley will be the featured speaker at the ACTT VI Conference where he will also be presenting two half-day switch workshops. Call 309/298-1634 for registration information.

Educational Resources Offers Preview CD-ROM

What a great idea! Educational Resources' K - 12 Preview CD allows you to save both time and money. Available this fall, this new CD-ROM will let you preview Educational Resources' top-selling educational titles. This unique "try before you buy" CD-ROM contains more than 75 software demonstrations, trial versions, and information on a variety of products.

Let Educational Resources know you'd like to see their preview product. Write to them at 1550 Executive Drive, Elgin, IL 60123; call toll free outside of Illinois 800/624-2926 (Illinois residents call 708/888-8300.); or fax 708/888-8499 or 8689.

Recommendations **continued from page 4**

abilities need to expand their views of allowable services, providing funds for technology tools needed so the children can participate in activities normally unavailable to them. Together with equipment, insurance should fund therapies such as speech therapy when a child acquires an augmentative communication device or occupational therapy when, for example, a child needs to develop a reliable movement to control input.

Summary

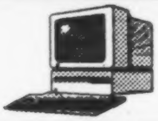
Assistive technologies represent both a symbolic and a real way of providing families and professionals with opportunities, equipment, and materials to encourage children's social and emotional development, autonomy, and independent behavior, in effect to "head learned helplessness off at the pass" as children grow older. But can we say that these benefits actually occur in "real life" with real children and families? The answer is "yes," but it depends on the resources of the educational program, belief in technology benefits, the technology competence of his or her educational staff, the child, and the interest, resources and persistence of families.

[1] The study reported on was funded by a grant from the U.S. Department of Education's Technology, Educational Media, and Materials for Individuals with Disabilities Program. PR #H180R10020. The Principal Investigator was Patricia L. Hutinger, Ed.D., Director of Macomb Projects at Western Illinois University.

[2] For the purposes of this study, *assistive technology* included those devices and applications which increased, maintained, or improved the functional capabilities of the children with disabilities participating in the study. The study especially emphasized computers, switches, alternative input and output, software, and dedicated augmentative communication devices.

Did You Remember To Mark March 16 and 17 on Your Calendar?

ACTT VI Conference!



Curriculum ACTTivities

Storytime with Bobby and Friends

Content Area: Group interaction, listening, causality, cooperative play, turn taking, attending, and communication

Child Objectives:
1. Press switch to turn a page from the computer story.
2. Participate in a group computer storytime activity.
3. Take turn pressing a switch.
4. Attend to the monitor while activating the switch.
5. Attend to the monitor while the other children are activating their switch.
6. Communicate by activating the augmentative communication board.

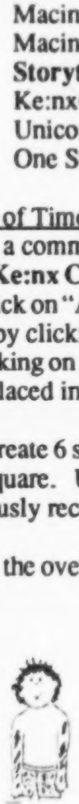
Materials:

Macintosh Computer with System 7.0, 4 MB RAM, and Color Monitor
Macintosh Microphone
Storytime Tales (Don Johnston Incorporated) "Bobby, Bobby What Did You Do?"[1]
Ke:nx® (Don Johnston Incorporated.)
Unicorn™ Expanded Keyboard, Key Largo™, or Unicorn™ Model 510
One Switch

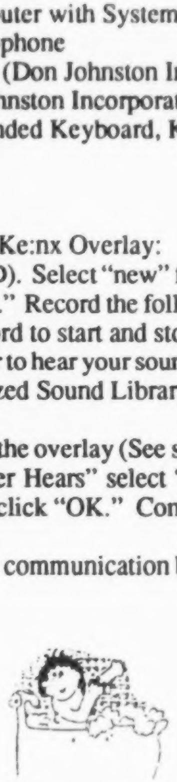
Ahead of Time:
Create a communication Ke:nx Overlay:
Open **Ke:nx Create** (DJD). Select "new" for Alternate Keyboard. Under the Options Menu select "Sounds for Untitled-1." Click on "Add Sound." Record the following responses: **dirty; wash, wash, wash; clean; my turn; thank you;** and **more** by clicking on record to start and stop to finish. This can be your voice or a child's. Check your recorded sound by clicking on the speaker to hear your sound. When satisfied, click "Save" and give the sound a name. Your sounds have been placed in the Digitized Sound Library for this specific overlay.

Next create 6 squares for the overlay (See sample). Click and drag mouse pointer to the desired size. Double click on the first square. Under "User Hears" select "Digitized" and then click on "Sounds." Select the desired sound that was previously recorded and click "OK." Continue doing this until all selected squares have been given a sound.

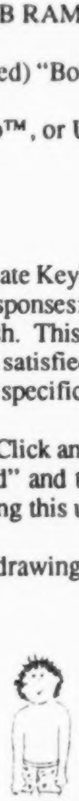
Create the overlay for the communication board by drawing or using the screen dump (see Create a "Bobby" storybook).



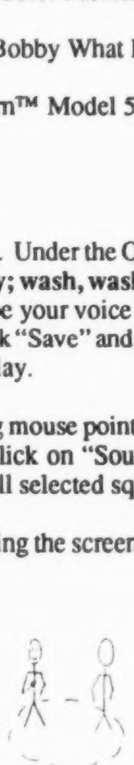
DIRTY



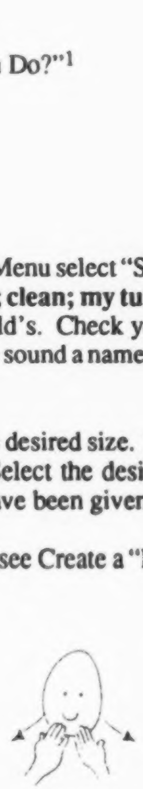
WASH, WASH, WASH



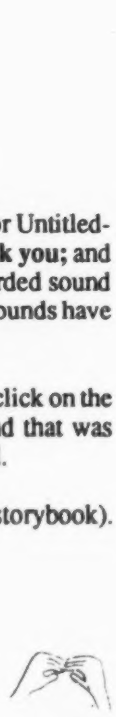
CLEAN



MY TURN



THANK YOU



MORE

continued on page 8

***Curriculum Activity* continued from page 7**

Under "User Sees" no graphics or labels will be created or selected for this particular setup. Save the setup and give it a name. Under the Ke:nx Menu load this setup. Attach a Unicorn Expanded Keyboard and a switch to Jack #3 on the Ke:nx input box. Since Jack #3 is designated as a click, this will allow you to use the Unicorn Board and a switch simultaneously. Boot **Storytime Tales**. Under the User Level select "Press to turn page." Test the setup by randomly activating the board and switch.

Computer Activity:

1. Set up the program ahead of time by loading the communication setup. Attach the switch and Unicorn Expanded Keyboard to Ke:nx. Boot **Storytime Tales**, and select the story "Bobby, Bobby What Did You Do?"

2. Arrange the computer center so that children can participate in this group story activity. If needed demonstrate switch pressing to the children so that they understand how and when to activate the switch. For example: when they hear the bell, press the switch or when they see the green triangle on the screen, it's time to press the switch.

3. Arrange the communication board for the child or children who need it.

4. Encourage the children to take turns. When one child is activating the switch, encourage the others to attend to the monitor. Talk about Bobby getting dirty and clean. Ask the child with the communication board questions such as, "What happened to Bobby?" "Is Bobby dirty or clean?", "Who's turn is it?", "What does Bobby need to do?", "Can you show me your hand?", or "What is Bobby?"

Create a "Bobby" storybook.

You can capture any image on the screen of a Macintosh LC, System 7.1 or higher, by simply pressing Command-Shift-3. You will actually hear a "click" similar to the sound a camera makes when it takes a picture. The image captured is saved as a "Picture" onto the desktop. Each graphic file is named as "Picture 1", "Picture 2," and so on. The number of graphics you can capture depends on the memory availability of your computer. The graphic can then be opened in a program that handles graphics such as **Claris Works 2.0** (Claris Corporation).

Capture each image of the story, "Bobby, Bobby." Print out the pages with a color printer or if using just black ink, color each page. Construct your own "Bobby" storybook. Place this book in the children's book area.

Create a communication apron or board for "Bobby."

Construct a simple story apron from a low pile material such as "Tempo."[2] Or create a story board from foam core board with the low pile material glued to it. Follow the storybook directions above to print images from the screen. Cut simple images from the story and make them sturdy by gluing cardboard or felt to the backs. Then, glue small pieces of female Velcro to the backs of each image. For the dirty "Bobby," color the Velcro and glue to the front of Bobby to represent dirt. As a character is being introduced from the computer story, take the image off the apron or board and present the image to the child.

Related Story Activity:

Provide each child with a washcloth so when the story says, "wash, wash, wash", each child can pretend to wash during this episode of the story.

Adaptations:

Motor Impairment: Select an appropriate switch or touch tablet and placement to meet the child's individual needs.

Visual Impairment: Focus attention on the "beep" sound to turn the page. Use the tactile Bobby characters when reading the story. For older children, Braille tape could be placed over the words in the printed book of "Bobby." As the story is being read on the computer, have the child follow along in the book.

Auditory Impairment: Use signs when the story is being read from the computer.

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[1] Don Johnston Incorporated. (1993). **Storytime tales: Bobby, bobby what did you do?** (computer program). Wauconda, IL. Based on the book **Storytime Tales** by Pati King-DeBaun

[2] Tempo Material. Lockfast, Inc., 10904 Deerfield Road, P.O. Box 42488, Cincinnati, Ohio 45242. 800/543-7157.

Calendar of Conferences

September 20-21, 1994: 5th Annual Emphasis on Technology Conference in Westmont, IL. Contact Educational Resources, 1550 Executive Drive, Elgin, IL 60123.

September 21, 1994: 2nd Annual Assistive Technology Expo in White Plains, NY. Contact Beth Heyd, Cedarwood Hall, Valhalla, NY 10595-1689; 914/285-7364.

September 21-22, 1994: Pennsylvania Association of Rehabilitation Facilities 25th Anniversary Conference and Expo in Lake Harmony, PA. Contact PARF, 2400 Park Drive, Harrisburg, PA 17110; 717/657-7608.

September 25-26, 1994: 2nd Annual Midwest Educational Technology Conference in Wichita, KS. Contact Mary Ann Claypool at 316/689-3726.

October 5-9, 1994: 1994 Annual International Division for Early Childhood Conference in St. Louis, MO. Contact DEC, 412/937-5430.

October 6-7, 1994: Illinois Education & Technology Conference in Peoria, IL. Contact Kathy Bjelland, Governor's Rural Affairs Council; 217/524-6867.

October 13-14, 1994: Quincy Conference 22 in Quincy, IL. Contact Quincy Conference, 1444 Maine St., Quincy, IL 62301; 217/224-6770.

October 18-22, 1994: Closing the Gap Conference in Minneapolis, MN. Contact Closing the Gap, P.O. Box 68, Henderson, MN 56044; 612/248-3294.

November 3-5, 1994: Learning Disabilities of Minnesota (LDM) Silver Anniversary Conference in St. Paul, MN. Contact LDM, 400 Selby Avenue, Suite D, St. Paul, MN 55102; 800/488-4395; 612/222-2696.

November 10-13, 1994: 3rd International Conference on Telecommunications in Education in Albuquerque, NM. Contact ISTE, 1787 Agate Street, Eugene, OR 97403.

November 17-21, 1994: 1994 ASHA Annual Convention in New Orleans. Contact American Speech-Language-Hearing Association, 10801 Rockville Pike, Rockville, MD 20852.

November 19-22, 1994: The Great Technology Get Together in Minneapolis, MN. Contact Dean Kephart, MECC, at 612/569-1572; or Connie Feil, TIES, at 612/638-8782.

November 30 - December 3, 1994: NAEYC Annual Conference in Atlanta, GA. Contact NAEYC at 202/328-2602.

December 8-10, 1994: 1994 TASH Conference in Atlanta, GA. Contact Robin Tincha, 206/361-8870.

January 19-21, 1995: Technology, Reading & Learning Difficulties 13th Annual International Conference in San Francisco, CA. Contact Diane Frost, 1070 Crows Nest Way, Richmond, CA 94803; 510/222-1249.

March 2-4, 1995: FATIC/TAM '95, sponsored by The Florida Assistive Technology Impact Conference (FATIC) and the Division of Technology and Media (TAM) of the Council for Exceptional Children, in Orlando, FL. Contact Jeffrey Fitterman, 813/872-5281.

March 16-17, 1995: ACTT VI Conference, sixth annual conference sponsored by Project ACTT, at Western Illinois University in Macomb, IL. Contact Joyce Johanson, 309/298-1634.

June 16-19, 1995: National Educational Computing Conference (NECC '95) in Baltimore, MD. Contact Doris Lidtke, 1705 East West Highway #611, Silver Spring, MD 20910.

July 10-14, 1995: ConnSENSE '95 in Cromwell, CT. Contact Chauncy Rucker, A. J. Pappanikou Center Technology Lab, U-64, 249 Glenbrook Road, Storrs, CT 06269; 203/486-0165.

Software Review

Award-Winning Software Builds, Enhances Skills

Easy Street™ software from Mindplay can be used to build or enhance reading, math, and problem solving skills for young children from preschool age through age 8. Using digitized speech, Easy Street introduces classification and labeling, builds visual memory skills, introduces matching, reinforces discrimination skills, and teaches counting basics. It can be used with a mouse or a TouchWindow™.

The Challenge Upgrade feature allows the program to be customized for individual students. Among the style options are sound settings, word settings, speed settings, speech settings, mistake-proof options, and build-your-own options.

Winner of the Parents' Choice Gold Award, CCL's Award of Excellence, and the Media & Methods Award, the program is available for Apple, Apple IIGS, MS-DOS, and Macintosh. The Apple version, on either 3.5" or 5.25" disks, sells for $49.99. MS-DOS version, on either 3.5" or 5.25" disks, sells for $59.99 (English or Spanish versions). The Macintosh version is $69.99 (English) or $99.99 (Spanish).

Contact Mindplay, 800/221-7911 for a catalog or ordering information.

Call for presentations:

If you are interested in presenting at the FATIC/TAM '95 Conference, to be held in Orlando, FL, on March 2-4, 1995, contact Jeffrey Fitterman for a proposal form. Proposal deadline is September 30, 1994. Fitterman may be reached by phone at 813/872-5281.

Software Review

Electronic Workbook Approach Disappointing

by Jennifer Lucie

"Come one, come all to the Big Bug Alphabet Circus!" Buzzy, a little bug who wants to learn the ABC's, will be the guide through the alphabet. **The Big Bug Alphabet Book** begins with a choice; you can hear the story read or play in the story. The option mode even allows the you to load a selected page right away.

Animated bugs and the letters perform circus tricks. There are trapeze artists with flying "u's" that turn into flying "n's". Many of the letters are found "hiding" on top other letters and the big bug clowns, acrobats, and contortionists help find them. While the bugs are doing their tricks, the narrator, with a life-like voice, reads the story and sings songs.

Like its ABC predecessors, this CD-ROM developed by Milliken, focuses on letters and the sounds they make. The biggest disappointments in this program are three "games" that are essentially electronic worksheets with neat sound effects. The "games" consist of matching letters with pictures that have the same beginning sounds, finding and identifying letters, and matching capital and lowercase. That portion of the software is inappropriate for the 3-7 year age range given in the advertisement.

The program does have some good points. Voices used are life-like. Children and adult voices are used, and some of them have different dialects and accents. A hide and seek game with Buzzy is enjoyable. Buzzy hides behind one of the letters, and it is your job to find him by clicking the letters. When found, he jumps out and says, "You're doing a really good job! I bet you're the best ABC'er in the **WHOLE** world!" When a young boy using the program heard that, he looked at me with a big grin. He then sang the alphabet song again, to prove his ABC'er status one more time.

While **The Big Bug Alphabet Book** is not the worst early childhood software on the market, its electronic workbook approach leaves a lot to be desired. Consider buying other CD-ROM's that are more developmentally appropriate for the age group listed. Then, AFTER all the "good stuff" has been acquired, if you have extra money in the budget, buy this program.

The Big Bug Alphabet Book is published by Milliken Publishing Company, 1100 Research Blvd., St. Louis, MO 63132. It's available for $29.95 from Educational Resources, 1550 Executive Drive, Elgin, IL 60123; 800/624-2926.

Free Curriculum Resource Guide

The Curriculum Courseware Resource Guide is available free to educators from Educational Software Institute in Omaha, NE. Over 6,600 titles from 357 publishers are included in this 620 page resource guide for curriculum products for Apple II, DOS, and Macintosh computers.

Subject areas are ESL, special education, and at-risk programs. Comparisons, descriptions, and supporting details are provided.

For your free copy, call 800/955-5570.

NAEYC Offers Two Technology Videos

Two videotapes discussing technology's place in early childhood programs are now available from the National Association for the Education of Young Children (NAEYC). **Computers and Young Children** features Barbara Bowman discussing how computers should be used in an early childhood program. This tape runs 17 minutes and sells for $39.

The newest video is **The Adventure Begins: Preschool and Technology.** Co-sponsored by Apple Computer, Inc. and NAEYC, this video shows how children and teachers in early childhood programs across America are using computers to enhance learning in developmentally appropriate ways. The 10 minute tape sells for $20.

The tapes may be ordered from NAEYC, 1509 16th Street, NW, Washington, DC 20036-1426. Shipping is free on all prepaid orders. Make checks payable to NAEYC.

Milliken Soon to Release New CD-ROM for 4 - 8 Year Olds

Milliken Publishing Company will soon have available **Animal Tales,** its newest CD-ROM title in the Milliken Interactive Learning series. Six original stories, each featuring an unusual character, use repetition and rhythm. The stories, targeted for children ages 4 to 8, illustrate concepts such as self-acceptance, overcoming fear, and expressing feelings. Contact Milliken Publishing at 1100 Research Blvd., P.O. Box 21579, St. Louis, MO 63132.

Technology Assessment Software Project Receives Federal Funding

by Patricia Hutinger

Unquestionably, the advent of assistive technologies such as more powerful and relatively inexpensive computers, together with alternative input and output devices, offers children and adults with disabilities the means to do things they have not been able to do before this time in history. However, without an appropriate assessment, determining what technology applicaitons a child could best use is like traveling in the American west without a road map.

While many computer application options exist, not all are appropriate for the individual characteristics of each child's disabilities and developmental level. The applications must be individualized depending on a number of conditions, including the child's preferences and skills, the nature of the disability, the child's developmental level, the family's wishes and expectations, available hardware and software, and many other factors. A team-based technology assessment helps sort out these factors, yet such assessments for children are few and far between.

Even if a technology assessment is carried out, those clinicians doing the assessment do not have the software they need to evaluate young children's ability to use the devices. Macomb Projects in the College of Education and Human Services at Western Illinois University has recently received funding[1] from the U.S. Department of Education's National Institute on Disabilities and Rehabilitation Research for a three-year project to develop developmentally appropriate technology assessment software for children from 18 months through 8 years of age who have moderate to severe disabilities.

The software, **Something's Fishy**, will be designed in three sections: Part 1) **Splish! Splash!** is a series of activities to assess levels of alternative input progression; Part 2) **Anchors Aweigh!** is a series of activities to assess complexity of task; and Part 3) **Oh Buoy!** is a series of activities which provide indicators of children's preferences for a variety of stimuli.

The purpose of Part 1 is to determine the child's present level of input ability, beginning with single switch input. The purpose of Part 2 is to determine the child's ability to use more complex tasks, ranging from direct select to scanning. Part 3 is designed to determine the child's preferences for color (hues and intensity), size, sounds (mechanical, animal, human, synthesized speech), volume, movement (animated drawings, video), image types (patterns, drawings, photographs), and nature of stimuli (visual, auditory, combination).

Something's Fishy will be based on a developmentally appropriate approach, with humor and surprise built in, to make the procedure one where the child is likely to attend to the activities clinicians need to observe in order to gain information necessary for making recommendations about appropriate technology applications. It will be produced on a CD-ROM and will run on a Macintosh, accessed by switches, the Ke:nx, a TouchWindow, and adapted keyboards. A three-year development period is projected; the software should be ready for marketing by fall 1997.

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[1] PR #H133G40141. Year 1 Project costs total $167,244. Federal share of first year funding for software development is $125,000, 75% of total costs.

Money-Saving Software Purchasing Program

Educational Resources is introducing the Partnership Plus Program, a money-saving software-purchasing program for schools. The program allows individual schools and districts to purchase hundreds of popular software titles under a site license at substantially reduced prices.

Schools pay only $10 per computer per software title and $15 per computer per CD-ROM title. Hundreds of titles from over 50 leading educational publishers are available through this program and are indicated in the Educational Resources' catalog as "*Partnership Plus Selection.*"

Call Educational Resources at 800/624-2926 for complete details.

Award-Winning Program Features African Safari

Available for both Macintosh and DOS computers, **Zurk's Learning Safari**, for children 3 to 7 years old, introduces children to math, science, and reading concepts. The African Serengeti is used as a unifying theme throughout the program. This award-winning program is now offered in a school version that contains a number of activities for cooperative learning. Contact Soleil Software at 415/494-0114 if you'd like more information.

Switch Making
with Patrick Meckley
at the ACTT VI Conference
on March 16 - 17, 1995

Plan to Attend!

A Great Resource for Software Needs!

Surplus Software International, Inc. is a clearinghouse for publishers, distributors, and retailers of their overstocked, over-produced, or distressed inventories. The company offers many current version, previous version, and promotional packages at tremendous values!

Call them today to be put on their mailing list to receive catalogs of their value-priced software. Surplus Software International, Inc., 489 North 8th Street, Hood River, OR 97031; 800/753-7877 or 503/386-1375; fax 503/386-4227.

Children Visit Moon with Putt-Putt

Children ages 3 to 8 will enjoy the latest Putt-Putt adventure, **Putt-Putt Goes to the Moon.** Putt-Putt arrives on the moon and meets Rover, a vehicle left behind by the astronauts. Their adventures together include helping the Moon People, meeting the Man in the Moon, building a rocket, and returning to Earth.

Friendship, cooperation, and teamwork are the themes for this new Putt-Putt program, which is presented in cartoon-style animation. The program has digitized speech and an original soundtrack.

Further information is available from Humongous Entertainment. Call 206/485-1212.

Tap Into Technology Assessment Training

One of the most important components of technology planning for young children is a technology assessment conducted by a team of people, including family members, therapists, and teachers. Macomb Projects realizes the value of having team members trained on the assessment process so that each child will benefit from appropriate equipment and applications. Without a technology assessment based on a team approach which closely involves families as full partners, determining assistive technology recommendations for an individual child are "hit and miss" at best. The promise of technology then falls short of its full potential for children and their families.

Between 1989 and 1992, Project TTAP: Technology Team Assessment Process was funded by the Early Education Program for Children with Disabilities (EEPCD) to develop a model to guide technology assessment team members in conducting technology assessments at their sites. From that model came two products available from Macomb Projects, **The Technology Team Assessment Process** and **TECH ACCESS.**

The Technology Team Assessment Process, contains over 190 pages which describe the TTAP process, explain the procedures to use before, during, and after a technology assessment, include forms to use during each phase of the process, and give resources for software and hardware. **TECH ACCESS,** which stands for "Technology Assessment for Computer Capability for the Education of Special Students," is an observation tool for assessing input methods (switch, touch tablet, or keyboard).

Macomb Projects is pleased to announce that the U.S. Department of Education's EEPCD has awarded TTAP Outreach funding[1], which will begin October 1, to provide replication training on our technology assessment model to teams of early childhood personnel and families. Three-day training sessions will be conducted in Macomb several times during the year. Training materials will consist of written modules and multimedia materials, including an interactive CD-ROM, **Tap into TTAP,** and videodiscs containing case studies of children and actual assessment situations. If you are interested in more information on TTAP services or a schedule of training dates, please contact Linda Robinson, TTAP Coordinator, 27 Horrabin Hall, WIU, Macomb, IL 61455; 309/298-1634.

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[1] TTAP received $132,500 from EEPCD for the first year of a three year project. Total first year costs are $148,150; the federal share is 89%. PR #H024D40023.

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TTAP Products referred to in the preceding article are available from Macomb Projects. The manual is $69.95 and TECH ACCESS is $19.95. Order using the order form on the last page of this issue or fax a purchase order to 309/298-2305.

Computer Program Assists IEP Writing

If you have **ClarisWorks** on your Macintosh and if you'd like help with your IEPs, consider **IEP Works**. This package, which contains a database of more than 1000 goals and objectives, features pull down menus, and auto cut and paste functions, among others.

IEP Works costs $150 and is available in K-8 and 7-12 versions from K-12 Micromedia Publishing, 6 Arrow Rd., Ramsey, NJ 07446; 800/292-1997.

The Mac is not a Typewriter

by Karen Baird

If you are transitioning from a typewriter to a computer there are some fundamental "rules" you learned in typing 101 that that need revision and others that need to be totally rewritten that differentiate the "typist" from the "keyboardist". *The Mac is Not a Typewriter*, by Robin Williams, is a style manual available at most bookstores and is a great reference book for any "would be" desktop publisher.

Most computer users pick up rather quickly on the concept of "text wrap." The computer actually moves the text on to the next line without activating the **return** key. Other differences between using the typewriter and the computer may not be so obvious. For example, with the typewriter, you would normally leave two spaces after a period that ends a sentence; when you use the computer, you only leave one.

Here are a few more useful tips from the book:

- Don't use any more than two fonts per page (italics and bold forms of the font are not considered different fonts).
- Don't underline. Underlining makes the characters more difficult to read especially when the letter has a descender (like j, g, q, y or p). Use *italics* or **bold** instead. If you must underline, draw a line under the text and position it lower than the **underline** option in the **style** menu.
- Use italic and bold type sparingly.
- If a word needs an accent mark, use it. For example, instead of using "Broderbund," use "Brøderbund." Look in the **Apple menu** for **Key Caps** and use the shift and option keys for symbols. Try this with different fonts, too. Each font has its own set of **Key Caps**.
- NEVER USE ALL CAPITAL LETTERS IN BODY TEXT, and rarely in headings. It is too difficult to read.
- When printing on a LaserWriter, never use city-named fonts like Chicago or Monaco.
- Never use the space bar to align text. It might look alright on the screen, but it won't when it comes out of the printer. Set the tabs and use the tab key.
- Use a decimal or right aligned tab for the numbers in numbered paragraphs.
- Either indent the first line of paragraphs or add extra space between them, but don't do both.
- Use serif type for body text unless you are going to allow for the lower readability of sans serif. This is serif text. This is sans serif text.
- Never combine two serif fonts on one page. Therefore, if you are using two fonts, one should be **serif** and the other should be **sans serif**.
- Encourage white space.
- Use some sort of bullet when listing items. Don't use a hyphen.
- Set the space before an italicized word also in italic.
- Reduce the size of punctuation marks in headlines.
- Space the lines closer together (leading) in headlines.

For a clear understanding of the new rules and why the rules of the game have changed, *The Mac is Not a Typewriter*, published by Peachpit Press, Berkeley, California is an investment you will not regret making.

New Software Titles Now Available from Laureate

Laureate Learning Systems' 1994 catalog includes brand new titles. **Exploring First Words, Exploring First Words II,** and **Exploring First Verbs** encourage users to explore and interact with vocabulary items in natural settings. The programs, which use full-screen scenes and lively animation, are appropriate for a wide range of uses. The programs are available for the Apple IIe ($90), The Apple IIGS, IBM, and Macintosh ($100).

My Paint requires no reading and is a simple, versatile paint program for young children. Each of the four **Talking Coloring Books** has 20 pictures of early vocabulary words and says the words aloud. These programs are available in Apple IIGS and IBM versions for $80.

Creature Magic offers four entertaining games for individuals with severe/profound disabilities. Access is through the keyboard, TouchWindow, or single switch. Each game introduces a language or cognitive concept and offers language enrichment along with entertainment. The program is available for the Apple IIe ($65), the Apple IIGS ($75) or the IBM ($75).

Older children might also enjoy Laureate's **Simple Sentence Structure**, which is intended to help children with language impairments understand the importance of Subject-Verb-Object order in simple sentences. The program uses high-quality speech, optional text, colorful graphics, and amusing animation. It is available for the Apple IIe ($150), the Apple IIGS ($175) and the IBM ($175).

For a copy of the catalog, contact Laureate Learning Systems at 800/562-6801 or 802/655-4755.

Supporting classroom diversity

Children's Art Software Incorporates Cultural Themes, Allows Exploration of Differences

by Letha Clark

ACTTive Technology provides this column as a regular feature for helping teachers use technology to expand their anti-bias curriculum.

Children bring influences of their own cultures and traditions to every circumstance. A turn at the computer is no different. Values of home, family, and community affect the way every child sees a situation. What if there was a software program that allowed for those differences? **EA*Kids Art Center**, by Electronic Arts, has two activities (of the five available) that incorporate "people" and "articles" from various cultures and themes.

The sticker activity has backgrounds to which a child can add people, animals and objects of her choosing. By the very design of the software, individualized representations are assured. The downtown area designed by a child from the inner city is guaranteed to be different from the downtown designed by the child from rural Illinois, but each will be reflective of what is known and important to the child. In all, there are 12 different backgrounds from which a child can choose and each has its own collection of stickers. In addition to Downtown, some of the other environments included are: Zoo, Carnival, Haunted House, Playhouse, and Fun House.

The costume feature provides "paper dolls" to dress using various articles of clothing, head gear (the head gear includes hair pieces too) and footwear from different cultures. Each item is colored before it is added to the picture. The paper dolls and costumes of Hollywood may be meaningless to some children but the chance to dress Playmates might be significant. Imagine being able to dress a paper doll that looks just like your best friend or one that looks like your grandmother.

The opportunity to explore encourages children to experiment with articles from different cultures and become familiar with those items. Familiarity increases the level of tolerance and acceptance of the differences found in and among the young children in early childhood programs. Including **EA*Kids Art Center** in the software choices available and offering children time to explore and experiment supports their quest for information about others.

Information about this software is available from Electronic Arts, P.O. Box 7578, San Mateo, CA 94403-7578. 800-KID-XPRT.

Award Winning Learning Adventure Featured in 1994 Terrapin Catalog

Terrapin Software's free 1994 catalog introduces new Terrapin products, in particular **Crystal Rain Forest**, a learning adventure which was the winner of the U.K.'s Gold Award for Best Primary Software.

The catalog also contains curriculum materials for kindergarten through secondary, the Logo language for either school or home use for all major computer brands, and robotics kits, starting at $270, for the Macintosh, Apple II, or PCs.

To order your free catalog, contact Terrapin Software, 400 Riverside Street, Portland, ME 04103-1068; 800/972-8200 or 207/878-8200; fax 207/797-9235.

Teachers Record Observations with Hand-held Technology

Learner Profile is a new asssessment tool from Sunburst/Wings for Learning that allows teachers to use hand-held technology to instantly record their observations of students, whether the students are in the classroom or on the playground.

Learner Profile can be used with either a **Newton Message Pad** or a bar code reader. Either method makes use of teacher-created lists of skills to be observed. Both methods transfer the information to a computer where it becomes part of a database. Using the database teachers can chose from various report options to print reports by student, by class, or by observational category.

For more information about this time-saving observational technology and about a 45-day preview period, contact Sunburst/Wing for Learning at 800/321-7511.

Software Allows Young Children to Visit and Explore Zoo

Children from two to six years old will enjoy exploring a zoo with Marblesoft's **A Trip to The Zoo**, a program comprised of an integrated series of **HyperStudio** stacks.

Children may explore the zoo on their own using a mouse or a TouchWindow, A single switch may also be used. In that case, the program takes the children on a guided tour of the zoo.

The program is available for the Apple IIGS for $35 and for the Macintosh for $60. The Mac version requires a CD-ROM drive. A version of the program is available for those who do not have **HyperStudio**.

Contact Marblesoft at 612/755-1402 for more information.

Stationery Pad Option A Real Time Saver

Have you ever wished you had a letterhead right on your computer file so you didn't have to type a heading everytime you typed a letter? Have you discovered that once you typed the letterhead and saved the document you could do a **Save As** next time you wanted the letterhead, but still thought, "isn't there an easier way?"

Well, there is an easier way, and believe it or not, you can read all about it in your Macintosh documentation. (You know, that little book that says "User's Guide" on it, the one you flipped through a couple times before you put it on your bookshelf next to the "eat more, lose more" diet manual someone gave you three birthdays ago.) The User's Guide contains all kinds of interesting information to help you get the most from your Macintosh.

Your Macintosh User's Guide will explain how to create a template for a Stationery Pad that can be used over and over as a master for all your letters. Most applications will allow you to select a stationery pad option when you first save a document. If not, you can create a Stationery Pad by following these easy steps:

- click to select the icon of the document you want to use as a template.
- choose Get Info from the File menu.
- click the "Stationery Pad" box in the lower right corner. An X should appear in the box.

Your document is now a stationary pad! Whenever you open it, an untitled window appears showing you a blank sheet of your stationery. You will be asked to name your new document.

If you ever move and need to change the address on your letterhead, you have to turn the stationery pad document back into a regular document. Just reverse the procedures you followed to make a stationery pad. Then make your corrections, open Get Info and click the box next to "Stationery Pad." You're back in business with a new template for your stationery! It's that quick and easy!

Isn't it amazing what you can learn by reading documentation?

MACOMB PROJECTS' COMPUTER PRODUCTS ORDER FORM

Name/Agency ______________________
Shipping Address ______________________
City ______________________
Phone (   ) ______________________
Billing Agency ______________________
Billing Address ______________________
State/Zip ______________________
Date of Order ______________________

Products	Price	Quantity	Total

MAKE CHECKS PAYABLE TO MACOMB PROJECTS

SHIPPING ____________

TOTAL ____________

Your check or purchase order must accompany the order. Shipping free with prepaid orders. Purchase Orders may be faxed to 309/298-2305. No phone orders accepted. Materials are shipped parcel post unless other arrangements are made. Please allow four to six weeks for delivery. Prices are subject to change without notice.

Orders from outside the U.S. must be paid in U.S. funds drawn from U.S. banks. Allow additional time for shipment.

ACTTive Technology Subscription Form

Name ____

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For a year's subscription to *ACTTive Technology*, complete this form and return it with a purchase order or check for $16.00 to Macomb Projects, 27 Horrabin Hall, Western Illinois University, Macomb, IL 61455.
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VOLUME 9, NUMBER 4 Fall 1994

The Potential of Assistive Technology

by Patricia L. Hutinger

The abbreviated case study that follows tells the story of Jimmy, a child who first participated in an ACTT site classroom when he was 4 years old. He is now 15. Although Jimmy has cerebral palsy with severe physical involvement, visual impairment, and a past history of illnesses and surgeries, he has oral communication skills. Confined to a motorized wheelchair, he likes watching baseball and enjoys writing poetry. Jimmy and his parents have continually faced many problems and small successes to ensure his progress. Very likely his problems are not entirely unique and are encountered by other children and families throughout the country.

During the past 11 years, Jimmy has used five different computers, beginning with an Apple II+. Now he has a Macintosh LC at school and a Macintosh Power PC at home, but the road to consistent technology use has been rocky with many ups and downs for him and his family. His actual access to technology and resulting success — or lack of success — have, for a variety of reasons, sometimes been limited.

Jimmy was in mainstreamed settings from kindergarten through junior high. Because of this placement, sometimes he did not receive necessary special education and related services such as resource placement, speech, or occupational or physical therapy. Administrative policies and the parents' wishes were and continue to sometimes be at odds. As teachers and aides changed over time, the emphasis on computer use changed. Jimmy's experiences clearly demonstrate the importance of ongoing follow-up support for family and staff and for continual training and assessment.

Jimmy's experiences with other children (who acknowledge him and "watch out" for him), with his teachers (who have passed him from one grade to another in spite of his inability to read at grade level and to acquire the content his peers acquired), and with the many professionals who work with him provides a pattern to weave his experience into the whole tapestry of technology use.

History of Jimmy's Computer Use

When Project ACTT first initiated computer activities into Jimmy's preschool classroom, his teacher and family acquired computer skills. Then he used a Koala pad and an Apple II+ computer to operate a remote robot named Topo throughout the classroom. During his preschool years IEP goals for Jimmy's computer use were related to increasing various skills, including problem solving and other areas of cognition, communication, fine motor, and social skills. Jimmy was adept at using a switch or small touch tablet to direct a robot's movement in his classroom during an exploratory or problem solving activity. He gained fine motor skills and representational abilities through keyboard use with play computer activities on a make-believe card-

When ACTT began in 1983 as a model demonstration project, we worked with well over 30 youngsters with disabilities from birth to six in a rural area of Illinois. Now we have expanded to over 68 replication sites across the country which serve approximately 6,000 children. We have been able to follow some of the original ACTT children as they progressed through school and have been aware both of the benefits computers and other assistive technologies offer them and of the problems their families and teachers often face concerning finding the right equipment, purchasing the equipment, integrating the technology into the home activities or classroom curriculum, procuring funding, and finding training. Then in 1991 Macomb Projects was fortunate to secure funding to carry on a qualitative research study[1] to find out what happened to some of those children, staff, and families as they moved through school. As part of that study, a series of case studies was developed. Jimmy's (not his real name) story is one of 14 case studies that resulted from the study.

continued on page 3

From The Editors. . .

by Linda Robinson

Do you know Jimmy? I'm sure you do. You may be his mother, father, teacher, therapist, psychologist, social worker or administrator. If you don't know him personally, then you at least have seen him in your area, or you have heard others talk about him. Yes, I'm sure you know him or know of him.

The reason I am so sure that you all know him is that we have received overwhelming feedback recently when we have talked about Jimmy during a presentation or workshop. People begin nodding their heads and offering to talk about the Jimmy they know. Jimmy's mother didn't think people would be interested in hearing about him. She was wrong. Our staff have even been surprised at the positive response. Jimmy's story contains many issues for special education and technology. We all like to hear about Jimmy, because we can relate to him, his family, and his team of professionals, and their struggles over the years.

We title our presentations about Jimmy, a "journey from preschool to high school." Journey implies ups and downs, and his story is certainly full of both. We discuss his case, not as a criticism of his situation, rather as a vehicle for discussing common problems involving administrative support, school personnel, training, equipment, and financial issues. The more we discuss these issues as a group, the closer we will come to finding some solutions which will be useful for similar children and similar situations.

Look at the children around you. Is there a child who could be benefiting from technology, but has not been given the opportunity? Is there a child who has access to a computer, but is not taking full advantage of it? Although the reasons aren't always obvious, if you look hard enough you can probably identify the obstacles to a child's successful use of technology. The solutions will, more than likely, depend on a team approach. Hopefully Jimmy's story will provide you with "food for thought" to apply to your own situation. In future issues we may consider publishing other case stories, since each one provides a different perspective and a slightly different set of problems.

Along with our story about Jimmy, we have provided information on the latest software, including Macintosh software, now available from familiar companies, and various tips for using equipment and programs. If you are a PowerPad user, you will be happy to learn about the new developments in software and equipment for using your PowerPad with the Macintosh. It is great to see the lists of appropriate Macintosh software and peripherals for young children getting longer and longer. There are not many places you can go to see and try out these newest early childhood options, except, of course, at the ACTT VI Conference. Check out the details in this issue, and start making plans to spend two days in Macomb next March. We guarantee you won't regret it!

Table of Contents

The Potential of Assistive Technology 1
From the Editors 2
Gestural Input System 4
Reading Circus 4
Picture-Perfect 4
ACTT VI Speaker 4
KID-FUN 4
Blasting off with Technology 5
PowerPad Meet the Mac 5
Memory: An Overview 6
Headphone Option 6
Public Domain for the Mac 6
Outreach Training 7
ClarisWorks Tip 7
Half-price Laureate Software 7
Let's Go to the Circus 7
STACK SHOP 8
Creature Magic/Creature Cartoons 8
Voice-in-aBox II 8
Software for IntelliKeys 10
Talk:About 10
ACTT VI 11
ACTT VI Registration Form 12
Calendar of Conferences 13
BIGmack 13
Free Internet Access 13
Reduced Prices for ClarisWorks .. 13
Supporting Classroom Diversity .. 14
Public Domain Switch Software ... 14
Mac Versions of RJ Cooper Software 14
Apple Public Domain Package 15
Product Order Form 15
ACTTive Technology Subscription Form 16

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***Potential* continued from page 1**

board model computer and disk drive, and talking word processing programs on a real computer.

Through the efforts of Macomb Projects, whose staff have also provided continuous consultation, assessment, and training to his family and school staff over the years, a national foundation gave Jimmy an Apple II to use at home when he was 5. At various times a Macomb Projects staff member has also been included in staffings and IEP development. Ensuring that equipment is used and maintained has required ongoing attention.

One day, when he was 10, we heard Jimmy, sitting in his wheel chair, say to us in his slow and halting speech, "*On Fridays, I go down to the handicapped room and help them. . . learn computers. . . they need it.*"

ACTT loaned an Apple IIe computer to the school for Jimmy to use when he left the preschool program. During summer sessions with ACTT staff and his parents, Jimmy started to enter words and sentences into the computer. It was a slow process and not altogether successful, but he was patient and determined. At this time he continued to work on scanning skills through switch use, since ACTT staff believed that switch input might be more efficient for him as his academic work progressed.

Both assistive technology access and applications were consistent and appropriate in preschool and kindergarten, but when Jimmy entered first grade the technology transition was weak. During his elementary and junior high school years he had an aide who did most of his work for him, entering information on the computer (although the adaptive equipment was right there) and moving his motorized wheelchair. Therefore, it was not clear to his teachers that Jimmy was unable to read, so he was promoted to the next grade level each year.

Some of his teachers were not convinced that technology was appropriate or useful for him. In early 1992, when the research[1] project began observations in Jimmy's classroom, he was using only a calculator and a tape recorder. The tape recorder was withdrawn because a teacher wanted Jimmy to "get it on his own," giving credence to the old saying "two steps ahead and one back." However, ACTT staff continued to lend the family technology support through participation in IEP staffings, phone consultations, and software loans.

In March of 1992, an IEP meeting was held for Jimmy. Everyone at the meeting agreed that they wanted Jimmy to be as independent as possible. The staff realized that his WISC-R scores indicated that his potential was average to low average. Yet, he had been receiving straight A's on his report card! Even though his parents were concerned about his inability to read, Jimmy was promoted from seventh to eighth grade. Jimmy's mother wanted him to have a different aide, one who would allow him to be independent and not do the work for him. The principal was aware of the problem and indicated that he would provide more direction for the aide. It was at this meeting that the school district decided to look into outside funds to secure a contemporary computer system for Jimmy to replace the IIGS he had been sharing with another student. ACTT staff provided input on both a system and on funding sources. A public service organization in his community raised funds to purchase a Macintosh LC II computer with appropriate adaptive devices for him to use at school. His new Macintosh LC with StyleWriter Printer, Ke:nx® interface, Apple IIe card, Universal Mount Switch, and Jelly Bean Switch were delivered in June of 1992.

Initially when school staff used a computer with him, they entered words into the program for him, instead of allowing him to enter words himself, either through keyboard or switch use. Jimmy had acquired the technology he needed, but without adequate training, school staff were not able to adapt the software to meet his needs.

With help, his program assistant was eventually able to customize some of his homework assignments for switch use. By the end of the study's observations in the Spring of 1993, Jimmy was beginning to use a word processing program with a Big Red Switch and Ke:nx to answer test questions.

In the Fall of 1993 Jimmy started high school with a new program assistant and a special education teacher. Both participated in five days of ACTT technology training during the summer. As a result of training his teacher ordered new software and equipment for him. The software included a word prediction program, so that Jimmy can enter words into the computer more quickly. He writes in his journal on his computer using letters on the Unicorn Expanded Keyboard to enter words. Al-

continued on page 6

UCPA Project Develops Gestural Input System for Computers

The United Cerebral Palsy Association's Power Art Project has developed a gestural input system for the computer so that children with disabilities can participate in a variety of art and creative activities. The gestural input system, called ShortHand©, allows the user (with or without disabilities) to move his/her hand along the surface of a PowerPad and cause something to happen on the screen. The computer understands these gesture-driven actions the same way it understands keyboard and mouse actions.

Power Art has also developed a mascot puppet, a parrot named ERGO, that turns his head and moves his mouth as directed by the child's gestures on the PowerPad and by the software. ERGO may help the child navigate his/her way through the software and the ShortHand system. ERGO asks the child questions, responds to events that have been chosen, and performs actions requested by the child.

The project has developed software using **HyperStudio**. More information about the Power Art Project and its products is available by contacting Power Art/UCPA, 992 Hearthstone Place, Stone Mountain, GA 30083.

Software Promotes Self-Expression

Mind*play*'s **Picture Perfect**, self-expression, art, and story-writing software for youngsters preschool to grade 6, contains colorful picture menus for non-readers, an 84 graphic library, freehand drawing capability, five brush sizes, five color choices, and a library of drawing tools.

Graphics can be moved, stretched , or flipped to fit a picture or story. Text can be added to the graphics, and the print features allow children to make original story books.

The Apple version (5.25") sells for $49.99. Contact 800-221-7911 for information or for a catalog.

Reading Circus Helps Reinforce Literacy Concepts

Children learning reading skills might hone those skills with **Jo-Jo Joins the Reading Circus**, a new Macintosh program from Mind*play*. As Jo-Jo, children discover the circus, meet and assist a variety of circus performers (a juggler, an acrobat, a clown, an animal trainer), and at the same time match upper and lower case letters and sounds, learn sight words, match body parts, and investigate concepts of classification and comparison.

This program contains Mind*play*'s new "challenge upgrade" feature which allows the teacher to tailor the program to fit an individual child's needs by selecting an appropriate level of difficulty from a menu of choices. Thus one program can serve children from kindergarten through grade 2.

Order this Macintosh program on either 3.5" disk or CD-ROM for $79.95. Call Mind*play* (800/221-7911) for a catalog and ordering information.

ACTT VI Featured Speaker to Promote Affordable Assistive Technology

Project ACTT will host its sixth annual early childhood assistive technology conference on March 16-17. The featured speaker, Patrick Meckley, is the director of the Wm. W. Fox Developmental Center in Dwight, IL. Patrick, the parent of a child with disabilities and a long-time electronics hobbyist, has long been a proponent of "affordable assistive technology."

Patrick will open ACTT VI with a keynote address and will hold make-it and take-it workshops on both afternoons of the conference.

Thursday's workshop will feature three switches: the sandwich switch, the video cassette storage box switch, and the sip/puff or air pillow switch. Prices for switch kits range from $2.00 to $20.00.

Friday's workshop focuses on the construction or modification of three switch-operated devices: an AM/FM radio, an RC 2000 remote control, and a greeting card communicator. (See page 6 of **ACTTive Technology's** Summer issue for more information about the communicator.) Kit prices range from $10.00 to $20.00.

ACTT VI will also feature Macomb Projects' own early childhood computer specialists.

Fill out the registration form on page 12, and join us for two days of fun, networking, and learning!

Children's Songs Stimulate Self-Esteem, Creativity

KID-FUN from Mind*play* , features songs for children from preschool to Grade 3. The songs, designed to enhance self-esteem and stimulate creativity, are performed by children's recording artist, Cindy the Songlady. **KID-FUN** is available in both audio tape ($10.95) and Windows CD-ROM ($69.95).

For ordering information call 800/ 221-7911.

Curriculum Integration

Blasting Off with Technology

by Linda Robinson

During a recent week-long training session conducted by ACTT, participants developed many exciting curriculum activities and focused on the philosophy of "curriculum integration." By the end of the training each participant had written an average of 15 activities for using one software program. They had also developed a variety of off-computer activities with printed materials to match their selected software.

A rocket theme came from the Macomb Projects' program, **Master Blaster**. One or two children press their switches to launch a rocket appearing on the monitor. Skills which may be enhanced with the program include causality, attending, social interaction, communication, fine motor and gross motor skills.

Janet Macejak, COTA, from Orland Hills, IL took this very simple switch program and designed a space environment for a classroom, including ceiling and wall decorations and many off-computer activities. Since the software is made for the Apple computer or a Macintosh with a IIe Card, a screen dump, such as the FingerPrint Card for Apple, or Macintosh's built-in screen dump, is needed to print various size rockets from the screen. Janet thought of every possible way to use that printout as part of an off-computer activity for the classroom.

To encourage fine motor development, Janet designed customized materials which included space ship puzzles in various sizes, a game board with matching rocket shapes, and a star shape for bubble-blowing. Gross motor skills could be enhanced with activities centering around specially designed moon shoes made out of dryer duct material, a space ship built from large blocks, or balloon rockets launched across a long string.

Another activity involved a group of children riding in a large cardboard space ship with one child pressing a switch to control sound effects from a tape recorder. Janet even had a man-in-the-moon snack for the children made with a banana body and raisin eyes. After listening to the book, **Mooncake**, by Frank Asch, the children could eat moon cakes made from ice or snow. Moondust made from cornstarch, water and green food coloring added an interesting effect to the room decorations and could be used for another activity.

For children who may have difficulty pressing a small switch to activate the software, the Unicorn Expanded Keyboard or Key Largo could be set up for switch input. A rocket printout from the software placed on the touch tablet may help young children associate their hand press with the action on the monitor.

Besides designing computer activities from screen printouts, training participants had the opportunity to design their own rocket ship using **HyperStudio**. Together they used the paint tools in the program to make a unique rocket, then used the animation option to make it launch. Sound effects were recorded and added to the screen. With a mouse click or press on the TouchWindow, the children now have another rocket to blast off into space.

Using this one simple switch-operated program, **Master Blaster**, many curriculum activities were designed to help children with a variety of skills.

Participants also created curriuclum activities for three other programs. In upcoming **ACTTive Technology** issues, activities developed by other ACTT trainees for these programs will be described.

PowerPad, Meet the Macintosh!

by Letha Clark

The PowerPad™ has long been a favorite in classrooms that serve children with a wide range of abilities. The device allows all children to participate in the same activity. Since the Macintosh made its way into the classroom, the PowerPad has often made its way to the storage shelf! Teachers and classroom staff who love the PowerPad, have asked about PowerPad software for the Macintosh.

Which leads me to ask. . . Do you have a PowerPad left over from the Apple computer days? Do you wish you could use that PowerPad with your Macintosh? Are you familiar with **HyperStudio**? If your answers are Yes, Yes, and Yes, then investigate the new **STACK SHOP** from Dunamis. This program requires **HyperStudio** and enables you to create new software for your classroom based on the interests of your group. Use **The STACK SHOP** "add on" to create programs that accept switch input, utilize the PowerPad, and activate battery-operated toys. Used with all the regular features of **HyperStudio** it becomes the power that makes good ideas reality. You can develop a program that shows a QuickTime™ movie, incorporates animation, makes use of scanned images, integrates speech and music, and uses the PowerPad to activate battery-operated toys.

The STACK SHOP really is a great program! Once you start using it, it becomes adicting!

See page 9 for more information and prices.

Potential continued from page 3

though the Macintosh LC he now uses at school is for his use alone, it stays in one room while Jimmy moves from class to class, so it is not always available to him.

In August, 1994, the Illinois Assistive Technology Project was instrumental in Jimmy's acquiring a Macintosh Power PC with appropriate adaptive peripherals for his home use. Until that time Jimmy had used an Apple IIe computer, a printer, an Echo Speech Synthesizer, a Big Red Switch, and a hands free telephone at home. He finally has equipment that is compatible with the system and peripherals he has at school.

Although Jimmy's technology story has been one of many struggles, he still sees a computer as an important part of his life, an area in which he has experienced success and has gained some self confidence. He has commented that he would like to make computer technology his career choice upon completing his public school experiences.

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[1] Effective Use of Technology to Meet Educational Goals of Children with Disabilities was a Macomb Projects research study funded by USDE's Technology, Educational Media, and Materials for Individuals with Disabilities Program, PR#180R10020. Copies of the Project's Final Report are available. Call 309/298-1634.

Discounts

on

ACTT VI Registrations

for

- **Parents**
- **Group Registrations**
- **Presenters**
- **Early Registrations**
- **Past Participants**

See page 12
or call 309/298-1634 for details

Software Appeals to Sense of Humor

IntelliPics Software Contains Sure-to-Please Graphics and Animation

IntelliPics™ from IntelliTools is exciting software that contains six fun, interesting, and clever activities sure to please and fascinate a young child. Each activity comes with an overlay for IntelliKeys. The activities include the following:

Animals contains graphics of children's favorite creatures. Children can make them bounce, grow, or melt! They can listen to the funny animal sounds, count the animals, color them, and change their sizes.

Make It Move lets children move a ball in lots of funny ways. The ball can crash, bounce, wiggle, and wobble.

Nursery Rhymes includes Humpty Dumpty, London Bridge, Hey Diddle Diddle, and Little Miss Muffet. The child is in control as these nursery favorites play in "living" animation.

Funny Noises is a simple cause and effect activity. The child presses a switch to see fun colors and hear crazy noises.

Adults can have a great time creating activities with IntelliPics. Choose a picture from among the 300 images that come with **IntelliPics** or paste in any Mac picture, Photo CD image, or QuickTime™ movie. Then add sounds using the Mac's microphone or type in text for the computer to pronounce. Animate your picture by selecting a motion from the 35 motions that come with the program. Or use the Movement Editor and create your own motions.

IntelliPics automatically makes an overlay for your pictures and activity. Select Make Overlay from the File menu and use Overlay Maker to edit and print the overlay. Whenever you use the **IntelliPics** activity, the program automatically sends the appropriate overlay to the IntelliKeys. All you have to do is slide the paper overlay in place.

It is also possible for you to customize the screen. You can choose palettes (pictures, movements, numbers, colors, sizes) and select all, none, or any combination.The range of numbers and colors can be selected; the sizes of items on the screen can be customized. You can even create your own border.

IntelliPics is $99.95 plus $5.00 for shipping and handling. It can be ordered from IntelliTools, 521 Central Avenue, Suite 205F, Richmond, CA 94804; 800/899-6687. In addition, to **IntelliPics**, IntelliTools has introduced 14 other new products which are featured in the company's latest catalog.

New Products Ease Difficulties for Novice Mac Users

Macomb Projects has two new products available for the novice Macintosh user. **The Wizardry of Your Mac** is full of tips for helping new Macintosh owners understand and get the most from their new computer. The booklet offers shortcuts for getting a job done quicker, gives tips and pointers for making life in the "work zone" easier, and provides clues for making the Mac snazzier! The 15-page booklet sells for $11.95.

The Macintosh - Where To Begin? is a 30-minute videotape to help new Macintosh owners set up and operate their computers. Viewers will be taken step-by-step through setting up the computer, turning it on, and using it. The tape sells for $39.95. Both products can be ordered using the form on the last page of this issue.

Memory: An Overview

by Carol Schneider

RAM (Random Access -- or working -- Memory) is temporary storage for programs and data that can be easily altered or deleted. When the computer is turned off, this information is erased. Think of RAM in these terms: My desk size is 90" X 30" and has four file drawers. My co-worker's desk is 45" X 30" and has two file drawers. Because I have a larger surface, I can place two computers on top of my desk and store up to 100 files in my drawers (ROM - or storage -- memory). In terms of computer applications, this means I have more working "surface." I can have more than one application open at a time. My co-worker can only have one computer on top of her desk and store only 50 files in her drawers. Therefore, her potential for using more than one program at a time is limited.

To find out how much RAM your Macintosh computer has, first activate the Finder. It can be found in the upper right hand corner of the desktop.

Move the cursor to the upper left hand corner to the multi-color Apple. Select "About this Macintosh." The total memory, including virtual memory (additional memory on the hard disk), will be displayed. For example, if your computer shows 10,240 K total memory, that means your computer has 10 mg of RAM. If your computer displays 8,192 K total memory, your computer has 8 mg of RAM.

Below the total memory, open programs will be displayed. The darkened bar indicates how much memory a program reserves for its own use.

Why is the RAM important? In order to work efficiently with large programs such as a drawing programs, Ke:nx with recorded voices, real time video, **QuickTime**, or **HyperStudio**, larger amounts of RAM are recommended.

To increase your memory in your computer without buying additional RAM chips, you can do the following:

1. Quit all programs that are not in use.
2. After all programs and windows are closed, restart your computer.
3. If you're on a network, turn off AppleTalk in the Chooser and restart your computer .
4. Remove unnecessary extensions. For example, remove the CD extension if you are not using a CD- ROM player.
5. Open the Control Panel; select "Memory," and reduce the size of the disk cache.
6. Change the amount of memory a program uses. (Click on the program's icon. Select Open Apple I. In the lower right hand corner, decrease the minimum size.)

Parent Registration Fees are REDUCED for the ACTT VI Conference on March 16-17!!

See pages 11-12 for conference details and registration form.

Headphone Option Beneficial

If you have Apple's new Macintosh PowerPC with CD-ROM (external or built-in), you can easily attach headphones to the computer. The headphones allow you to listen to an audio CD or audio track in the background while you do other work on your computer. Your co-workers won't be able to tell the difference!

This feature also allows you to record music for your **HyperStudio** music library.

Public Domain and Shareware for the Macintosh

If you teach young children and have had trouble trying to locate Macintosh public domain and shareware software programs for your students. The seven disks (14 programs) in Macomb Projects' **Macintosh Public Domain and Shareware Software** collection will provide an opportunity for you to begin a public domain and shareware collection .

When using **String Art**, leave easy grip pegs and yarn next to the computer so the children can use the concrete object to help develop an understanding for the symbolic two dimensional symbol on the screen. **Connect Four** and **MacTuberling** can be used in the same manner.

KeyWack and **Baby Smash** are great programs to use to introduce the keyboard to very young children. A simple program like **HyperKeys** helps a child develop "left to right: and "top to bottom" visual tracking habits.

These and 8 other programs are included in the 7-disk set, which sells for $28. The disks are accompanied by a brief manual which provides descriptions of each program and suggestions for using the programs.

After you have looked at this software, watch your students use it. They will give you ideas for meaningful learning opportunities.

The programs in the collection can be copied and passed along to parents and other teachers in your program. Public domain and shareware software, plus a little imagination, allow you to enhance learning opportunities for a small investment.

Use the order form at the end of this issue to order **Macintosh Public Domain and Shareware Software.**

Outreach Projects Set 1995 Training Dates

Macomb Projects' two EEPCD (Early Education Program for Children with Disabilities) Outreach Projects, Project ACTT and Project TTAP, have scheduled their 1995 training dates. Persons interested in training should contact Linda Robinson, 309/298-1634, to obtain a registration form and further information about the Projects and their training content.

ACTT Training

ACTT has scheduled three weeks of training for 1995. The five-day sessions will be conducted January 9-13, June 5-9, and July 31-August 4. Training format is a combination of lecture, demonstration, and hands-on computer experience. Training content includes computer operations, switch construction, curriculum integration, and technology applications for birth to three and preschool children with mild to severe disabilities. Content is based on a model of technology integration developed by Project ACTT. Since one of our project goals is to train others to use this model, we offer the training free of charge to participants who agree to adopt the ACTT model into their early childhood program. We welcome others to participate according to a daily fee schedule.

TTAP Training

Our newest outreach project, TTAP: Technology Team Assessment Process, has just completed its first three-day training session in November. Training content is based on a team approach to technology assessment developed by TTAP. During the training, participants learn how to select equipment and software for an assessment, how to evaluate positioning and equipment placement, and how to determine input method and curriculum applications for children, birth to eight years, with mild to severe disabilities. Participants receive "hands-on experience" with the process by actually planning and assessing a young child's technology needs as team members.

At this time TTAP is taking applications from sites who are interested in adopting our technology assessment model. Based on these requests and applications, further training will be scheduled in the Spring and Summer of 1995.

A ClarisWorks Tip

Have you ever needed or wanted to transfer an MS DOS file to a Macintosh disk? If so, **ClarisWorks** provides an easy solution.

First store the information from the MS DOS computer on a Double Sided High Density disk.

Save the information as "Text." **ClarisWorks** will also accept the following MS DOS files: **Microsoft Excel 4.0; Microsoft Excel 3.0;Microsoft WinWord; Microsoft Word 3.0; Microsoft Word 4-5; Microsoft Word PC; Microsoft Works 1.1; Microsoft Works 2.0; Microsoft Write 1.0; Microsoft Works 2.0 DUB; Microsoft Works 2.0 SO; Word Perfect 1.0 x; Word Perfect 2.x; Word Perfect PC 4.2;** or **Word Perfect PC 5.0**

Boot **ClarisWorks**. Select "new" for word processing program. Insert your IBM disk. In the program, select "Open" under the file menu. If your document is not displayed, change to the appropriate file type. If "Open" does not work, try selecting "Insert" from the file menu. Once your file is displayed, double click on the file and it will open your program.

ClarisWorks will also open a **Microsoft Works** Database or Spreadsheet file.

Half-price Sale on Laureate IIe Software

Laureate Learning Systems is offering a 50% discount on all Laureate Apple IIe software until December 31, 1994. This half-price offer is good on more than 50 talking programs that cover areas of language development, cognitive processing, reading, and instructional games. For more information or a free copy of Laureate's catalog, call 800/562-6801.

Circus Program Focuses on Opposites

Introduce children to opposites with Laureate's **Let's Go to the Circus**. Common circus scenes and characters (clowns, acrobats, animals) teach and reinforce the concept of opposites. More than 50 vocabulary words and 25 sets of opposites are introduced.

Each circus scene allows a choice of four activities: the computer will name a selected object, name a selected object and identify its attribute or action, name a selected object and give a description and its opposite, or ask the child to find an object based on a description. The object animates.

An optional activity that can be turned on or off before the program begins is "Dazzling Dogs." Three performing dogs hide out behind different objects. Once the child finds all three dogs, they perform one of their circus acts.

The program, which can be accessed by a keyboard, touch screen, single switch, or mouse, has record-keeping capability. It is available for the Apple IIGS (1MB) or the IBM (640K) for $90.

Contact Laureate for ordering information. 110 East Spring Street, Winooski, VT 05404; 802/655-4755.

STACK SHOP FROM DUNAMIS ALLOWS USE OF POWERPAD, INTELLIKEYS, SWITCH WITH HYPERSTUDIO

Dunamis, Inc., along with United Cerebral Palsy Associations, Inc. of Washington, DC, announced the release of its new Macintosh authoring tool, **The STACK SHOP: Power Access for Kids. The STACK SHOP** is part of a two year collaboration between the two organizations and represents a new direction in accessible software for young children.

The STACK SHOP is a collection of companion tools for use with **HyperStudio** which allow the user to incorporate devices such as the PowerPad, IntelliKeys, and single switches into **HyperStudio** stacks. **The STACK SHOP** offers not only add-on NBAs (New Button Actions), but also a tutorial, disk documentation, demo stacks, starter cards, and clip art and animation files.

Beyond the 'input tools," **The STACK SHOP** enhances the operation of **HyperStudio** through two additional NBAs. Button Player NBA allows the sequencing of button events which can give the user more control over the operation of the stack. The second tool is the "Toy Control NBA." This NBA allows the use of battery-operated toys to be controlled from a **HyperStudio** stack. One or two toys can be plugged into the new Macintosh PowerPad Interface Box and provide the user and the child a truly interactive environment.

In addition, **The STACK SHOP** tools contain the following items:

1) *For the PowerPad*: Dunamis and UCPA, Inc. are pleased to present a new input system for individuals with disabilities. ShortHand, a kid's language, is a two dimensional gestural input system that allows the computer to interpret a set of user gestures on the PowerPad. The ShortHand NBA tool allows the user to set up a **HyperStudio** stack to run buttons using defined gestures. Also, the ShortHand NBA allows for a musical feedback system that turns the PowerPad into a musical pad.

The PowerPad Grid NBA sets up a traditional PowerPad grid which the user may define up to 12 box locations, each activating a button on the

continued on page 10

LAUREATE'S NEW "CREATURE" SOFTWARE INTRODUCES IMPORTANT COGNITIVE CONCEPTS

Laureate's Fall 1994 catalog features two new early instructional games, **Creature Magic** and **Creature Cartoons**. **Creature Magic** contains four games that introduce important language and cognitive concepts: 1) the concept of non-existance by making things appear and disappear, 2) the difference between one and more than one, 3) the understanding of prepositions such as "on" and "in," and 4) the importance of word order.

Creature Magic has high quality speech, colorful graphics, and amusing animations. It is accessible with keyboard, touch screen, single switch, or mouse and is available for the Apple IIe ($32), the Apple IIGS ($75), or the IBM ($75).

Creature Cartoons for the Macintosh ($75) features five animated games that help youngsters increase auditory and visual attention and develop cause and effect and turn-taking skills. It is accessible with keyboard, touch screen, single switch, or mouse.

More information is available from Laureate. Contact the company at 110 East Spring Street, Winooski, VT 05404 or call 802/6a55-4755.

WISCONSIN TECH PROJECT OFFERS KIT FOR LOW-COST COMMUNICATION AID

Voice-in-a-Box II is a simple, low cost, portable voice-output communication aid that can be used with any non-speaking person whose communication needs do not exceed 16 voice messages in any one setting.

A person can record a voice message up to 3.75 seconds long that correspond to a picture on any square of Voice-in-a-Box II. When the user activates that square, the message is spoken in a clear, easy-to-understand digitized voice. The user activates any of the 2" x 2" squares using a stylus, finger, or headstick. The keypad is covered by a plexiglass keyguard with 13/16th inch holes over each square. For persons without the motor skills to directly access the 16 "keys," the device also has four jacks for attaching any kind of external switches.

The device operates on four AA batteries, and it never loses its messages when the batteries die.

Voice-in-a-Box II is available in kit form for only $120 from the Wisconsin Assistive Technology Initiative. Kit assembly is not difficult. For more information, contact Chuck Frame, Assistive Technology Specialist, N.E.W. Assistive Technology Project, 414/448-2235.

STACK SHOP continued from page 9

HyperStudio stack. Again, each location provides musical tone feedback to the user.

2) *For the IntelliKeys*: The IntelliKeys Grid NBA sets up a grid (like the PowerPad) which the user may define and download to the IntelliKeys through Overlay Sender (a program by Intellitools). The IntelliKeys Control NBA offers the user the ability to create custom overlays that do not have to be set up in a grid format. Again, the user must use Overlay Maker (a program by Intellitools) to send the overlay to the IntelliKeys.

3) *For the keyboard and Don Johnston Switch Interface Box*: While **HyperStudio** is primarily a mouse-driven environment, **The STACK SHOP** Keyboard NBA allows the user to activate buttons on a stack with keystrokes. These keystrokes can be defined to meet a particular need of the child using the keyboard. As a result, each of the outlets of the Don Johnston Switch Interface Box may be assigned to activate specific buttons in a HyperStudio stack.

4) *For single switch use*: **The STACK SHOP** provides a wide array of switch actions for the individual user. The Scan Switch NBA provides autoscan, step scanning, and sequential running of buttons. With this NBA, the user may offer auditory and visual prompting as well as a preference menu for the teacher or parent to instantly adjust the type of switch to meet the individual needs of the user.

Dunamis President, Ben Satterfield, commented, "Our goal for **STACK SHOP** is to empower special education teachers and parents to be able to use the computer as a regular tool in their work with kids. To this end, **STACK SHOP** gives them access to pretty much all of the significant special adaptive input devices available. To this they can add the creative power and simplicity of **HyperStudio**! Now they have the best tool, to date, with which to create customized learning activities for their particular students."

Dunamis will sell **The STACK SHOP** bundled with **HyperStudio** at an introductory price of $225. **The STACK SHOP** will also be available separately for $149.95 for those who already have **HyperStudio**. **The STACK SHOP** bundled with **HyperStudio**, the PowerPad, and the Macintosh PowerPad Interface Box sells for $675. **The STACK SHOP** bundled with **HyperStudio**, the IntelliKeys, and Overlay Maker sells for $690.

Dunamis also has prepared a series of interactive training materials which will allow teachers to master the concepts involved in using **HyperStudio** and **The STACK SHOP**. These will be sold separately, each selling for $49.95.

A portion of each sale of **The STACK SHOP** will go to UCPA, Inc. to help fund additional research and demonstration projects for using assistive technology with children, youth, and adults who have disabilities.

Early Childhood Software Available for IntelliKeys

UCLA has created custom overlays which work with IntelliKeys for 22 of their software programs, including **Wheels on the Bus** and **Old McDonald's Farm**. There are versions for both Macinosh and Apple IIe (which work on Apple IIGS and Macintosh LC with a IIe emulator card). For more information, contact UCLA Intervention Program, 1000 Veteran Avenue, Room 23-10, Los Angeles, CA 90024; 310/825-4821.

kidTECH also has several early learning Macintosh programs with IntelliKeys overlays: **Old McDonald's Farm, Five Little Ducks, and Best of kidTECH**. The overlays are designed for youngsters with early cognitive functions and work with those who have limited mobility. Contact kidTECH, 3204 Perry Place, Bakersfield, CA 93306; 805/873-8744.

Don Johnston, Inc. Introduces Innovative Communication Software

Talk:About, Don Johnston Incorporated's new conversation software for the Macintosh, lets individuals who are non-speaking participate in real communication. **Talk:About** is an orthographic-based communication system based on research by the Univerisity of Dundee in Scotland on pragmatic social interaction and the use of communication aids.

Talk:About includes tools for quick, easy, informative conversation. The tools are Quick:Chat, Story:Talk, and Story:Panel. Quick:Chat is the palette with buttons that have words and phrases for quick conversations. Each button contains one category or portion of conversation such as greetings, small talk, continuers or farewells.

Story:Talk is the database of events, experiences, and opinions that are to be included in conversation. It allows you to communicate your own stories, save conversations for retelling later, and carry on conversations with many people at once.

Story:Panel is the toolbar for opening, retrieving, moving through, and speaking Story:Talk files.

Talk:About is $490 and is available from Don Johnston Incorporated. 800/999-4660 or 708/526-2682. Fax 708/526-4177.

Sixth Annual Early Childhood Technology Conference

Project ACTT to Host ACTT VI in March

What is ACTT VI?

ACTT VI is a small, informal technology conference which offers sessions and hands-on opportunities to learn about using computers and adaptive peripherals for young children with disabilities. The March 16-17, 1995 conference is the sixth annual assistive technology conference sponsored by Project ACTT (Activating Children Through Technology), an Outreach project funded by the U.S. Department of Education's Early Education Program for Children with Disabilities. The ACTT VI Conference is only one of a variety of services and training opportunities Project ACTT makes available to parents, teachers, and other professionals who work with children age birth through eight with disabilities.

Who should attend ACTT VI?

ACTT VI is for anyone who desires assistive technology information and training. Teachers, parents, program assistants, school and program administrators, university professors, students, and State Part H and 619 coordinators have comprised the participant lists of past ACTT conferences. Everyone who wants to learn more about assistive technology applications for children ages birth through eight is welcome! We keep the conference small to provide personal attention, hands-on opportunities with the equipment and software, and plenty of networking opportunities among participants. Parents are especially welcome, and registration fees have been reduced to encourage parent attendance.

What topics are covered?

Past conference sessions have covered ways to integrate technology into the early childhood classroom, creative curriculum activities, hands-on experiences with a variety of adaptive peripherals, preview labs for commercial and public domain software, opportunities to make switches, Adaptive Firmware Card and Ke:nx workshops, information on technology assessments, expressive arts and technology, augmentative communication, results of research on the barriers and benefits of assistive technology, and previews of new products.

Who are the presenters?

The core group of presenters is comprised of the staff of various projects belonging to Macomb Projects. These trainers, technology specialists, and early childhood specialists provide assistive technology training and technical assistance to teachers and families throughout the year. They have presented workshops and training sessions for schools and agencies across the country, as well as sessions at Closing the Gap, TAM, DEC, CEC, and other state and regional conferences. Each year's conference features a special keynote speaker. Read about the 1995 speaker on the reverse side of this page. ACTT VI also welcomes interested persons from other projects and agencies to apply for a presentation at ACTT VI. Presentation proposal forms are available by calling 309/298-1634 or faxing 309/298-2305. (ATTN: Joyce)

When and where will ACTT VI be held in 1995?

ACTT VI will be held on March 16 - 17, 1995 in Horrabin Hall on the Western Illinois University campus in Macomb, IL. The conference begins each day with a continental breakfast and opportunities for participants to meet informally. Most sessions last an hour and a half, but some hands-on sessions are 1/2 day sessions. The conference ends by 4:00 each day. Breakfasts, lunches, and sodas during breaks are included in the registration fee.

How can I be part of ACTT VI?

Just fill out the registration form on the reverse side and send it with your check or purchase order to ACTT VI, 27 Horrabin Hall, Western Illinois University, Macomb, IL 61455. If you have questions or would like to give a presentation, call 309/298-1634 and ask to speak with Joyce.

Sixth Annual Early Childhood Conference to Feature Switch Workshops, Affordable Technology

ACTT VI, the 1995 annual early childhood technology conference sponsored by Project ACTT (Activating Children Through Technology) will feature Patrick Meckley, "Illinois' Mr. Switchman" and Director of the Wm. W. Fox Developmental Center in Dwight, IL. Patrick will give a keynote presentation and two switch workshops during the conference. A parent of a child with disabilities and a long time computer and electronics hobbyist, Patrick has many years of experience in making *AFFORDABLE* assistive technology a reality.

In addition to his opening keynote address, Patrick will be presenting two make-it and take-it switch workshops. The Thursday workshop will feature a Sandwich Switch, a Video Cassette Storage Switch, and a Sip/Puff or Air Pillow Switch. Friday's workshop features the modification of three feedback devices to be used with these switches: an AM/FM radio, a remote control, and a ten-second digital communicator. Fees (ranging from $2 to $20) for each item will be charged the days of the workshops.

Other sessions will be presented by members of the Macomb Projects' staff who have developed numerous products and materials to assist parents, teachers, and other professionals to integrate computers and adaptive devices into the lives of their children with disabilities. Topics will include the expressive arts and technology, literacy and technology, assessment and technology, developmentally appropriate curriculum and technology. In addition, sessions will be offered which allow participants hands-on experiences with various peripheral devices, such as the Ke:nx. Macomb Projects' vast library of public domain and commercial software will be available in a preview lab. (Due to time allowances and a limited number of computers, participants will not be able to copy public domain programs. Copies of some public domain programs will be available for sale.)

Various technology products developed by Macomb Projects will be available for sale at the registration desk! Many valuable, interesting, and unique door prizes to be given away! Lunches included with registration fee!

SEND IN YOUR REGISTRATION TODAY! SEE REVERSE SIDE FOR MORE INFORMATION

ACTT VI Registration

Name ____________ Agency ____________
Address ____________ City ____________ State ______ Zip ______
Phone where I can most easily be contacted (____) ____________

Registration fees include continental breakfasts, lunches, and sodas each day.

Regular Registration
____ $55 enclosed for the two-day conference
____ $35 enclosed for Thursday, March 16 only
____ $35 enclosed for Friday, March 17 only

Parents of young children (0-8) with disabilities
____ $35 enclosed for the two day conference
____ $20 enclosed for Thursday, March 16 only
____ $20 enclosed for Friday, March 17 only

____ **Check if you require special accomodations**
What accomodations are requested: ____________

Special Deals:
____ $45 enclosed for early registration (Must be postmarked by December 23, 1994)
____ $45 enclosed per person for Group Registration (four or more people from the same agency)
•Send All Group Registration Forms Together with Payment or Purchase Order

Registrations postmarked after March 4, 1995 are $65 for two days; $45 for one day.

Questions? Call 309/298-1634. Ask for Joyce

Your payment or purchase order must accompany registration. Phone registrations will not be accepted. Make checks and money orders payable to Macomb Projects (U.S. Funds only, please). Send payment and registration to ACTT VI Conference, 27 Horrabin Hall, Western Illinois University, Macomb, IL 61455.

Calendar of Conferences

November 30 - December 3, 1994: NAEYC Annual Conference in Atlanta, GA. Contact NAEYC at 202/328-2602.

December 8-10, 1994: 1994 TASH Conference in Atlanta, GA. Contact Robin Tincha, 206/361-8870.

January 19-21, 1995: Technology, Reading & Learning Difficulties 13th Annual International Conference in San Francisco, CA. Contact Diane Frost, 1070 Crows Nest Way, Richmond, CA 94803; 510/222-1249.

February 16-18, 1995: Twenty-fifth Annual Mid-South Conference on Communicative Disorders in Memphis, TN. Call 901/678-5800.

March 2-4, 1995: FATIC/TAM '95, sponsored by The Florida Assistive Technology Impact Conference (FATIC) and the Division of Technology and Media (TAM) of the Council for Exceptional Children, in Orlando, FL. Contact Jeffrey Fitterman, 813/872-5281.

March 13-15, 1995: Midwest Education and Technology Conference in St. Louis, MO. Contact Conference Coordinator, 1460 Craig Road, St. Louis, MO 63146; 314/872-8282.

March 15-17, 1995: 24th Annual Conference of Northwest Council for Computer Education in Bellevue, WA. Contact University of Oregon, Eugene, OR 97403-1277.

March 15-18, 1995: Technology and Persons with Disabilities Conference in Los Angeles, CA. Contact CSUN, 18111 Nordhoff St., Northridge, CA 91330-8340; 818/885-2578.

March 16-17, 1995: ACTT VI Conference, sixth annual early childhood technology conference sponsored by Project ACTT, at Western Illinois University in Macomb, IL. Contact Joyce Johanson, 309/298-1634.

March 23-25, 1995: 36th Annual Conference of the California Transcribers and Educations of the Visually Handicapped in Santa Clara, CA. Contact CTEVH, 741 North Vermontvenue, Los Angeles, CA 90029-3594.

April 5-9, 1995: The Council for Exceptional Children Annual Convention in Indianapolis, IN. Contact CEC, 1920 Association Drive, Reston, VA 22091; 703/620-3660.

May 18-21, 1995: Midwest AEYC Annual Conference in Fargo,ND. Contact Roberta Schieck, NDSU, Box 5057, Fargo, ND 58105.

June 9-14, 1995: RESNA '95 RECREAbility Conference in Vancouver, Canada. Contact RESNA, Suite 1540, 1700 Moore St., Arlington, VA 22209-1903; 703/524-6686.

June 16-19, 1995: National Educational Computing Conference (NECC '95) in Baltimore, MD. Contact Doris Lidtke, 1705 East West Highway #611, Silver Spring, MD 20910.

June 17-19, 1995: Emerging Technologies Lifelong Learning in Baltimore, MD. Contact University of Oregon, 1787 Agate St., Eugene, OR 97403-1923.

July 10-14, 1995: ConnSENSE '95 in Cromwell, CT. Contact Chauncy Rucker, A. J. Pappanikou Center Technology Lab, U-64, 249 Glenbrook Road, Storrs, CT 06269; 203/486-0165.

July 30-August 1, 1995: 1995 Partnerships for Progress Conference in Washington, DC area. Contact NEC*TAS, 500 NationsBank Plaza, 137 E. Franklin St., Chapel Hill, NC 27514.

Looking for Public Domain and Shareware Software? Read about Macomb Projects Software Packages on pages 7, 14, & 15

Affordable Voice Output Device

AbleNet Introduces BIGmack

AbleNet, Inc. has introduced its lastest communication aid, BIGmack, an easy and affordable voice output device. BIGmack has a surface about the size of a Big Red Switch and an easy-to-operate volume control. A message can be recorded or changed in a very short time. One activation plays an entire message; continual pressure on BIGmack will not trigger a repetition. Since BIGmack has an external switch jack, it can be activated either by a switch or by pressing the BIGmack surface directly.

BIGmack comes in red, green, yellow, or blue and requires a 9-volt battery. It costs $74. Shipping is $6. Contact AbleNet at 800/322-0956 for more information or fax your order to them at 612/379-9143.

Free Internet Access

Want to access Internet FREE? It may be possible. The International Internet Association has received grants to provide free and unlimited access to Internet to more than two million users in the United States. For an application, fax your name and address to Steve Rowe at the International Internet Association at 202/387-5446. Phone 201/928-4007 if you have questions about the offer.

Claris Provides Illinois Reduced Pricing

Illinois has a special agreement with Claris. Schools can purchase **Claris Works** for $25 a copy from North Cook ESC. Contact Glenn Magle at 708/419-5065 for more information.

(**ACTTive Technology** readers in other states might want to check to see if Claris has a similar agreement with their states also.)

Supporting Classroom Diversity

There's A Storyteller in All of Us

by Letha Clark

ACTTive Technology provides this column as a regular feature for helping teachers use technology to expand their anti-bias curricula.

There is a story lurking inside every child just waiting to be written. **Storybook Weaver** by MECC provides the opportunity and the tools for children to write and illustrate their own stories.

Children choose the layout of the page and from several different foregrounds and backgrounds. Characters from many cultures and folklore can be added to the story. Other images that can be added include objects of transportation, styles of habitat, "critters" of all kinds, and sounds. Size and orientation of people, vehicles, homes, and animals can be changed.

If the story includes narration, it can be written at the bottom of the page. Each page of the story is developed in much the same way.

The story building design of this program gives children from all cultures an easy process to record a portion of their family's oral history.

Add MECC's **Storybook Weaver** ($49.95) to your classroom software library.

Check out the Scholastic Parent Bookshelf offerings!. Computer software featured in the Nov/Dec brochure includes **Bailey's Book House** ($29.95), **Millie's Math House** ($29.95), and **KidDesk** ($19.95).

Videos, games, books for kids and for parents are also featured at very reasonable prices.

Write Scholastic, Parent Bookshelf, 2931 East McCarty, P.O. 7502, Jefferson City, MO 65102

Apple Public Domain and Shareware Switch Software Meets Variety of Needs

Macomb Projects now has a package of public domain and shareware switch programs available that can be used to meet the growing needs of a young child with disabilities. The **Apple Public Domain and Shareware Switch Software** package contains 12 programs, including **Adapted Frog and Fly, New Cause and Effect, CATS Switch**, or **Fireworks, Blocks, Wheelchair**, software which helps develop an understanding of causality.

After the child has developed the understanding that his/her action has caused the reaction on the computer, then move on to more sophisticated concepts. **The Scanning Game** can be used to help the child to learn when to activate a switch at an appropriate time. As a little creature crawls across the screen, the child is to press the switch when the creature is in front of the box containing the hand. This is a good way to introduce the concept of scanning to a young child who will need this skill to communicate.

Simple Simon on the **Toddler and Preschool Gameroom** disk can be used with a red and blue switch to develop visual memory skills.

Children who are nonverbal and need to learn to communicate with assistive technology will also benefit from **Tot Lingo**. This is a public domain program that very young children (using such inexpensive three dimensional props as a ball, toy barn, or dress-up clothes) can use to communicate with an interventionist such thoughts as "blow more bubbles" or "roll the ball to me."

Through the use of the switch programs contained in this package, children can gain a variety of skills ranging from developing an understanding of causality to higher level cognitive skills needed for scanning and communication.

This switch software package can be ordered from Macomb Projects for $36. A brief manual is included which describes and gives some pointers for using each program. Use the order form on the last page of this issue to order **Apple Public Domain and Shareware Switch Software.**

Mac Versions of Popular Apple Programs Available from R.J. Cooper

Joystick Trainer and **Early & Advanced Switch Games** from R.J. Cooper & Associates are two of the company's Apple programs now available for the Macintosh. **Joystick Trainer** starts at a very early motor and cognitive level and progresses through nine activities of increasing challenge.

Early & Advanced Switch Games, the company's oldest Apple product and biggest seller, can now be purchased for the Mac. The collection of 13 activities ranges from cause and effect, through following directions and matching, up to using the switch to make and print out a funny face.

Demo versions, which may be copied and passed to others, are available on request. The programs themselves sell for $89. Add 10% for shipping and handling fees.

Order from R.J. Cooper & Associates, 24843 Del Prado #283, Dana Point, CA 92629; 800/RJCOOPER.

Apple Public Domain, Shareware Package Available

Besides the public domain switch software described on page 7, Macomb Projects has an **Apple Public Domain and Shareware for Children** packet which includes an assortment of twelve Apple software programs.

Among the progams are **Fire Organ** and **Sparkee**, great programs to use for introducing the keyboard to young children. **Elf ABC** is similar to **Stickybear ABC's**. When a key is pressed on the keyboard, a picture of an object whose name begins with that letter appears on the monitor.

Gameroom and Learning Center has a great program called "Music." You might place different colored stickers on the z,x,c,v,b,n,m, and , keys and then create songsheets using the same colored stickers. This activity can help children develop left to right and top to bottom visual tracking skills that will be needed for reading.

The game format of **Spy's Demise** helps children realize each key has a different purpose. In this program, children use the right and left arrow keys to move through a maze. It also helps children develop visual tracking skills and eye hand coordination in a fun way!

Talking Keyboard should be used with an Echo™ speech synthesizer. When a key is pressed, the Echo says the name of the letter. When the Return key is pressed, the Echo reads the line. Children who are beginning to write love this program because the computer tells them the word they wrote. Using the computer keyboard to write helps children with delayed motor skills continue developing their literacy skills without worrying about their handwriting.

Talking PowerPad is a wonderful program to use to enhance your existing curriculum with the computer. Use it to create your own overlays about your school, students, or community.

Diversi-Copy, a simple and quick copy program for making backups, is included in the package also.

Apple Public Domain and Shareware for Children, containing 12 programs and a brief manual describing each program, sells for $36. Use the form below to order.

MACOMB PROJECTS' ORDER FORM

Name/Agency ____________________ **Billing Agency** ____________________

Shipping Address ____________________ **Billing Address** ____________________

City ____________________ **State/Zip** ____________________

Phone (   ) ____________________ **Date of Order** ____________________

Products	Price	Quantity	Total

MAKE CHECKS PAYABLE TO MACOMB PROJECTS
Add Shipping/Handling Charge of $3.00/order.

SHIPPING ____________________

TOTAL ____________________

Your check or purchase order must accompany the order. Shipping free with prepaid orders. Purchase Orders may be faxed to 309/298-2305. No phone orders accepted. Materials are shipped parcel post unless other arrangements are made. Please allow four to six weeks for delivery. Prices are subject to change without notice.

Orders from outside the U.S. must be paid in U.S. funds drawn from U.S. banks. Allow additional time for shipment.

ACTTive Technology Subscription Form

Name ____

Agency ____

Street Address ____

City ______________________ **State** __________ **Zip** __________

For a year's subscription to *ACTTive Technology*, complete this form and return it with a purchase order or check for $16.00 to Macomb Projects, 27 Horrabin Hall, Western Illinois University, Macomb, IL 61455.
Orders from outside the U.S. must be paid for in U.S. funds drawn from U.S. banks.

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